# Galaxy
MAGAZINE

NOVEMBER 1958

35¢

THE CIVILIZATION GAME
By
CLIFFORD D. SIMAK

•

THE FIRST SPACESHIP
By
WILLY LEY

•

BIRDS OF A FEATHER
By
ROBERT SILVERBERG

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# THE TIN AGE

ATOMIC Age, Space Age, Automated Age—whatever name is finally chosen for our multiplex era, it should certainly not exclude the astonishing tin can. Only by being so taken for granted could it have grown to a statistical marvel: the 42 billion cans used a year in the U. S. alone weigh, *empty*, 4,600,000 tons, a consumption of steel exceeded only by the automobile and construction industries, and sealed within these metal containers are more than 2,000 different and sometimes unbelievable items — food, of course, but also motorcycles, tennis balls and Geiger counters, books, bikes, shaving cream, spray-on bandages, these are just a handful snatched from a list that grows by night as well as day, for research is forever finding ways of canning things that had never been thought cannable before.

The tin can was born in the 13th century, when medieval artisans discovered that by dipping a sheet of iron into molten tin, they could stop corrosion and rust. The next step took 500 years; in 1795, the revolutionary French government offered a 12,000 franc prize to anyone who could preserve food effectively, for the army suffered more casualties from food poisoning and diet deficiencies than from enemy muskets. Nicholas Appert, a Parisian confectioner, pickler and vintner, accepted the challenge, but he needed fourteen years to conquer it. In 1809, Napoleon gratefully gave the award to Appert, who had packed his food like vintage wines. He partially cooked the food, then placed it in bottles, which were corked, wired, and submerged in boiling water. Appert had unwittingly sterilized his food.

The process worked, but the fragile glass containers often broke in transit. A year later, an Englishman, Peter Durand, revived the medieval discovery and developed the "canister," an iron container plated with tin, with a soldered cover. The tin can came to America in 1819 when another Englishman, William Underwood, built a successful business by canning such Eastern delicacies as lobster and cranberries for the homesick pioneers who were settling the West. Underwood's clerks quickly

*(Continued on page 138)*



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Cover by WENZEL Showing a takeoff from Aldebaran IV.

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# THE CIVILIZATION GAME

By CLIFFORD D. SIMAK

Illustrated by DICK FRANCIS

FOR some time, Stanley Paxton had been hearing the sound of muffled explosions from the west. But he had kept on, for there might be a man behind him, trailing him, and he could not change his course. For if he was not befuddled, the homestead of Nelson Moore lay somewhere in the hills ahead. There he would find shelter for the night and perhaps even transportation. Communication, he knew, must be ruled out for the moment; the Hunter people would be monitoring, alert for any news of him.

One Easter vacation, many years ago, he had spent a few days at the Moore homestead, and all through this afternoon he had been haunted by a sense of recognition for certain landmarks he had sighted. But his visit to these hills had been so long ago that his memory hazed and there was no certainty.

As the afternoon had lengthened toward an early evening, his fear of the trailing man began to taper off. Perhaps, he told himself, there was no one, after all. Once, atop a hill, he had crouched

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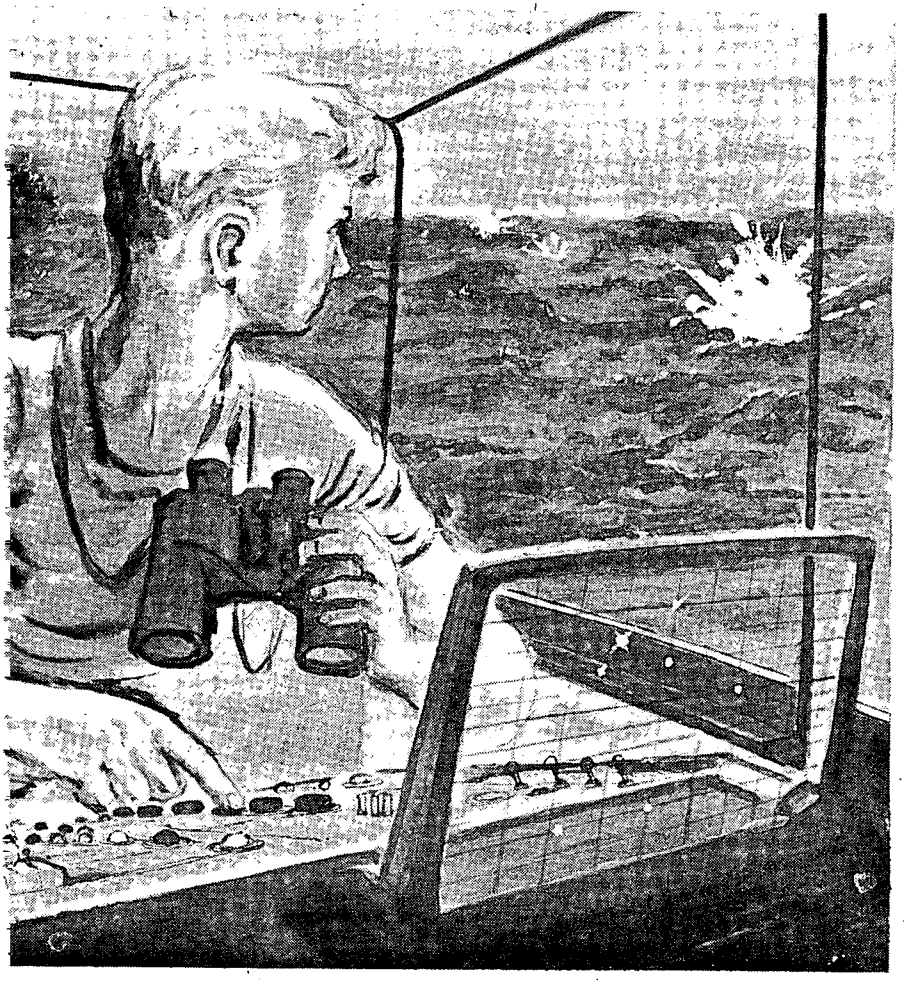
*The ones who went to the stars were in no danger . . . it was those who stayed behind to guard Man's heritage that challenged deadly unknown perils!*





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in a thicket for almost half an hour and had seen no sign of any follower.

Long since, of course, they would have found the wreckage of his flier, but they might have arrived too late and so, consequently, have no idea in which direction he had gone.

Through the day, he'd kept close watch of the cloudy sky and was satisfied that no scouting flier had passed overhead to spot him.

Now, with the setting of the sun behind an angry cloud bank, he felt momentarily safe.

HE came out of a meadow valley and began to climb a wooded hill. The strange boomings and concussions seemed fairly close at hand and he could see the flashes of explosions lighting up the sky.

He reached the hilltop and stopped short, crouching down against the ground. Below him, over a square mile or more of ground, spread the rippling flashes, and in the pauses between the louder noises, he heard faint chatterings that sent shivers up his spine.

He crouched, watching the flashes ripple back and forth in zigzag patterning and occasionally a small holocaust of explosions would suddenly break out and then subside as quickly.

Slowly he stood up and wrapped his cloak about him and raised the hood to protect his neck and ears.

On the near side of the flashing area, at the bottom of the hill, was some sort of foursquare structure looming darkly in the dusk. And it seemed as well that a massive hazy bowl lay inverted above the entire area, although it was too dark to make out what it was.

Paxton grunted softly to himself and went quickly down the hill until he reached the building. It was, he saw, a sort of observation platform, solidly constructed and raised well above the ground, with the top half of it made of heavy glass that ran all the way around. A ladder went up one side to the glassed-in platform.

"What's going on up there?" he shouted, but his voice could be scarcely heard above the crashing and thundering that came from out in front.

So he climbed the ladder.

When his head reached the level of the glassed-in platform area, he halted. A boy, not more than fourteen years of age, stood at the front of the platform, staring out into a noisy sea of fire. A pair of binoculars was slung about his neck and to one side of him stood a massive bank of instruments.

Paxton clambered up the rest of the way and stepped inside the platform.

"Hello, young man!" he shouted.



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The youngster turned around. He seemed an engaging fellow, with a cowlick down his forehead.

"I'm sorry, sir," he said. "I'm afraid I didn't hear you."

"What is going on here?"

"A war," said the boy. "Pertwee just launched his big attack. I'm hard-pressed to hold him off."

PAXTON gasped a little. "But this is most unusual!" he protested.

The boy wrinkled up his forehead. "I don't understand."

"You are Nelson Moore's son?"

"Yes, sir, I am Graham Moore."

"I knew your father many years ago. We went to school together."

"He will be glad to see you, sir," the boy said brightly, sensing an opportunity to rid himself of this uninvited kibitzer. "You take the path just north of west. It will lead you to the house."

"Perhaps," suggested Paxton, "you could come along and show me."

"I can't leave just yet," said Graham. "I must blunt Pertwee's attack. He caught me off my balance and has been saving up his firepower and there were some maneuvers that escaped me until it was too late. Believe me, sir, I'm in an unenviable position."

"This Pertwee?"

"He's the enemy. We've fought for two years now."

"I see," said Paxton solemnly and retreated down the ladder.

He found the path and followed it and found the house, set in a swale between two hillocks. It was an old and rambling affair among great clumps of trees.

The path ended on a patio and a woman's voice asked: "Is that you, Nels?"

She sat in a rocking chair on the smooth stone flags and was little more than a blur of whiteness—a white face haloed by white hair.

"Not Nels," he said. "An old friend of your son's."

From here, he noticed, through some trick of acoustics in the hills, one could barely hear the sound of battle, although the sky to the east was lighted by an occasional flash of heavy rockets or artillery fire.

"We are glad to have you, sir," the old lady said, still rocking gently back and forth. "Although I do wish Nelson would come home. I don't like him wandering around after it gets dark."

"My name is Stanley Paxton. I'm with Politics."

"Why, yes," she said, "I remember now. You spent an Easter with us, twenty years ago. I'm Cornelia Moore, but you may call me Grandma, like all the rest of them."

"I remember you quite well," said Paxton. "I hope I'm not intruding."



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"Heavens, no. We have few visitors. We're always glad to see one. Theodore especially will be pleased. You'd better call him Granther."

"Granther?"

"Grandfather. That's the way Graham said it when he was a tyke."

"I met Graham. He seemed to be quite busy. He said Pertwee had caught him off his balance."

"That Pertwee plays too rough," said Grandma, a little angrily.

A ROBOT catfooted out onto the patio. "Dinner is ready, madam," it said.

"We'll wait for Nelson," Grandma told it.

"Yes, madam. He should be in quite soon. We shouldn't wait too long. Granther has already started on his second brandy."

"We have a guest, Elijah. Please show him to his room. He is a friend of Nelson's."

"Good evening, sir," Elijah said. "If you will follow me. And your luggage. Perhaps I can carry it."

"Of course you can," said Grandma drily. "I wish, Elijah, you'd stop putting on airs when there's company."

"I have no luggage," Paxton said, embarrassed.

He followed the robot across the patio and into the house, going down the central hall and up the very handsome winding staircase.

The room was large and filled with old-fashioned furniture. A sedate fireplace stood against one wall.

"I'll light a fire," Elijah said. "It gets chilly in the autumn, once the sun goes down. And damp. It looks like rain."

Paxton stood in the center of the room, trying to remember.

Grandma was a painter and Nelson was a naturalist, but what about old Granther?

"The old gentleman," said the robot, stooping at the fireplace, "will send you up a drink. He'll insist on brandy, but if you wish it, sir, I could get you something else."

"No, thank you. Brandy will be fine."

"The old gentleman's in great fettle. He'll have a lot to tell you. He's just finished his sonata, sir, after working at it for almost seven years, and he's very proud of it. There were times, I don't mind telling you, when it was going badly, that he wasn't fit to live with. If you'd just look here at my bottom, sir, you can see a dent . . ."

"So I see," said Paxton uncomfortably.

The robot rose from before the fireplace and the flames began to crackle, crawling up the wood.

"I'll go for your drink," Elijah said. "If it takes a little longer



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than seems necessary, do not become alarmed. The old gentleman undoubtedly will take this opportunity to lecture me about hewing to civility, now that we have a guest."

Paxton walked to the bed, took off his cloak and hung it on a bedpost. He walked back to the fire and sat down in a chair, stretching out his legs toward the warming blaze.

It had been wrong of him to come here, he thought. These people should not be involved in his problems and his danger. Theirs was the quiet world, the easygoing, thoughtful world, while his world of Politics was all clamor and excitement and sometimes agony and fear.

He'd not tell them, he decided. And he'd stay just the night and be off before the dawn. Somehow or other he would work out a way to get in contact with his party. Somewhere else he'd find people who would help him.

THERE was a knock at the door. Apparently it had not taken Elijah as long as it had thought.

"Come in," Paxton called.

It was not Elijah; it was Nelson Moore.

He still wore a rough walking jacket and his boots had mud upon them and there was a streak of dirt across his face where he'd brushed back his hair with a grimy hand.

"Grandma told me you were here," he said, shaking Paxton by the hand.

"I had two weeks off," said Paxton, lying like a gentleman. "We just finished with an exercise. It might interest you to know that I was elected President."

"Why, that is fine," said Nelson enthusiastically.

"Yes, I suppose it is."

"Let's sit down."

"I'm afraid I may be holding up the dinner. The robot said—"

Nelson laughed. "Elijah always rushes us to eat. He wants to get the day all done and buttoned up. We've come to expect it of him and we pay him no attention."

"I'm looking forward to meeting Anastasia," Paxton said. "I remember that you wrote of her often and—"

"She's not here," said Nelson. "She—well, she left me. Almost five years ago. She missed Outside too much. None of us should marry outside Continuation."

"I'm sorry. I shouldn't have—"

"It's all right, Stan. It's all done with now. There are some who simply do not fit into the project. I've wondered many times, since Anastasia left, what kind of folks we are. I've wondered if it all is worth it."

"All of us think that way at times," said Paxton. "There have



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been times when I've been forced to fall back on history to find some shred of justification for what we're doing here. There's a parallel in the monks of the so-called Middle Ages. They managed to preserve at least part of the knowledge of the Hellenic world. For their own selfish reasons, of course, as Continuation has its selfish reasons, but the human race was the real beneficiary."

"I go back to history, too," said Nelson. "The one that I come up with is a Stone Age savage, hidden off in some dark corner, busily flaking arrows while the first spaceships are being launched. It all seems so useless, Stan. . . ."

"On the face of it, I suppose it is. It doesn't matter in the least that I was elected President in our just-finished exercise. But there may be a day when that knowledge and technique of politics may come in very handy. And when it does, all the human race will have to do is come back here to Earth and they have the living art. This campaign that I waged was a dirty one, Nelson. I'm not proud of it."

"There's a good deal of dirty things in the human culture," Nelson said, "but if we commit ourselves at all, it must be all the way — the vicious with the noble, the dirty with the splendid."

The door opened quietly and Elijah glided in. It had two glasses on a tray.

"I heard you come in," it said to Nelson, "so I brought you something, too."

"Thank you," Nelson said. "That was kind of you."

Elijah shuffled in some embarrassment. "If you don't mind, could you hurry just a little? The old gentleman has almost killed the bottle. I'm afraid of what might happen to him if I don't get him to the table."

## II

DINNER had been finished and young Graham hustled off to bed. Granther unearthed, with great solemnity, another bottle of good brandy.

"That boy is a caution," he declared. "I don't know what's to become of him. Imagine him out there all day long, fighting those fool battles. If he was going to take up something, I should think he'd want it to be useful. There's nothing more useless than a general when there are no wars."

Grandma clacked her teeth together with impatience. "It isn't as if we hadn't tried. We gave him every chance there was. But he wasn't interested in anything until he took up warring."

"He's got guts," said Granther proudly. "That much I'll say for him. He up and asked me the other day would I write him some battle music. Me!" yelled Gran-



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ther, thumping his chest. "Me write battle music!"

"He's got the seeds of destruction in him," declared Grandma righteously. "He doesn't want to build. He just wants to bust."

"Don't look at me," Nelson said to Paxton. "I gave up long ago. Granther and Grandma took him over from me right after Anastasia left. To hear them talk, you'd think they hated him. But let me lift a finger to him and the both of them—"

"We did the best we could," said Grandma. "We gave him every chance. We bought him all the testing kits. You remember?"

"Sure," said Granther, busy with the bottle. "I remember well. We bought him that ecology kit and you should have seen the planet he turned out. It was the most pitiful, down-at-heels, hungover planet you ever saw. And then we tried robotry—"

"He did right well at that," said Grandma tartly.

"Sure, he built them. He enjoyed building them. Recall the time he geared the two of them to hate each other and they fought until they were just two piles of scrap? I never saw anyone have such a splendid time as Graham during the seven days they fought."

"We could scarcely get him in to meals," said Grandma.

Granther handed out the brandy.

"But the worst of all," he decided, "was the time we tried religion. He dreamed up a cult that was positively gummy. We made short work of that . . ."

"And the hospital," said Grandma. "That was your idea, Nels . . ."

"Let's not talk about," pleaded Nelson grimly. "I am sure Stanley isn't interested."

PAXTON picked up the cue Nelson was offering him. "I was going to ask you, Grandma, what kind of painting you are doing. I don't recall that Nelson ever told me."

"Landscapes," the sweet-faced old lady said. "I've been doing some experimenting."

"And I tell her she is wrong," protested Granther. "To experiment is wrong. Our job is to maintain tradition, not to let our work go wandering off in whatever direction it might choose."

"Our job," said Grandma bitterly, "is to guard the techniques. Which is not to say we cannot strive at progress, if it still is human progress. Young man," she appealed to Paxton, "isn't that the way you see it?"

"Well, in part," evaded Paxton, caught between two fires. "In Politics, we allow evolvement, naturally, but we make sure by periodic tests that we are developing logically and in the human manner. And we make very sure



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we do not drop any of the old techniques, no matter how outmoded they may seem. And the same is true in Diplomacy. I happen to know a bit about Diplomacy, because the two sections work very close together and—"

"There!" Grandma said.

"You know what I think?" said Nelson quietly. "We are a frightened race. For the first time in our history, the human race is a minority and it scares us half to death. We are afraid of losing our identity in the great galactic matrix. We're afraid of assimilation."

"That's wrong, son," Granther disagreed. "We are not afraid, my boy. We're just awful smart, that's all. We had a great culture at one time and why should we give it up? Sure, most humans nowadays have adopted the galactic way of life, but that is not to say that it is for the best. Some day we may want to turn back to the human culture or we may find that later on we can use parts of it. And this way, if we keep it alive here in Project Continuation, it will be available, all of it or any part, any time we need it. And I'm not speaking, mind you, from the human view alone, because some facet of our culture might sometime be badly needed, not by the human race as such, but by the Galaxy itself."

"Then why keep the project secret?"

"I don't think it's really secret," Granther said. "It's just that no one pays much attention to the human race and none at all to Earth. The human race is pretty small potatoes against all the rest of them and Earth is just a worn-out planet that doesn't amount to shucks."

He asked Paxton: "You ever hear it was secret, boy?"

"Why, I guess not," said Paxton. "All I ever understood was that we didn't go around shooting off our mouths about it. I've thought of Continuation as a sort of sacred trust. We're the guardians who watch over the tribal medicine bag while the rest of humanity is out among the stars getting civilized."

THE old man chortled. "That's about the size of it. We're just a bunch of bushmen, but mark me well, intelligent and even dangerous bushmen."

"Dangerous?" asked Paxton.

"He means Graham," Nelson told him quietly.

"No, I don't," said Granther. "Not him especially. I mean the whole kit and caboodle of us. Because, don't you see, everybody who joins in this galactic culture that they are stewing up out there must contribute something and must likewise give up something — things that don't fit in with the new ideas. And the human race



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has done just like the rest of them, except we haven't given up a thing. Oh, on the surface, certainly. But everything we've given up is still back here, being kept alive by a bunch of subsidized barbarians on an old and gutted planet that a member of this fine galactic culture wouldn't give a second look."

"He's horrible," said Grandma. "Don't pay attention to him. He's got a mean and ornery soul inside that withered carcass."

"And what is Man?" yelled Granther. "He's mean and ornery, too, when he has to be. How could we have gone so far if we weren't mean and ornery?"

And there was some truth in that, thought Paxton. For what humanity was doing here was deliberate doublecrossing. Although, come to think of it, he wondered, how many other races might be doing the very selfsame thing or its equivalent?

And if you were going to do it, you had to do it right. You couldn't take the human culture and enshrine it prettily within a museum, for then it would become no more than a shiny showpiece. A fine display of arrow heads was a pretty thing to look at, but a man would never learn to chip a flint into an arrow head by merely looking at a bunch of them laid out on a velvet-covered board. To retain the technique of chipping arrows, you'd have to keep on chipping arrows, generation after generation, long after the need of them was gone. Fail by one generation and the art was lost.

And the same necessarily must be true of other human techniques and other human arts. And not the purely human arts alone, but the unique human flavor of other techniques which in themselves were common to many other races.

Elijah brought in an armload of wood and dumped it down upon the hearth, heaped an extra log or two upon the fire, then brushed itself off carefully.

"You're wet," said Grandma.

"It's raining, madam," said Elijah, going out the door.

AND so, thought Paxton, Project Continuation kept on practicing the old arts, retaining within a living body of the race the knowledge of their manipulation and their use.

So the section on politics practiced politics and the section on diplomacy set up seemingly impossible problems in diplomacy and wrestled with those problems. And in the project factories, teams of industrialists carried on in the old tradition and fought a never-ending feud with the trade unionism teams. And, scattered throughout the land, quiet men and women painted and composed and wrote and sculped so that the



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culture that had been wholly human would not perish in the face of the new and wonderful galactic culture that was evolving from the fusion of many intelligences out in the farther stars.

And against what day, wondered Paxton, do we carry on this work? Is it pure and simple, and perhaps even silly, pride? Is it no more than a further expression of human skepticism and human arrogance? Or does it make the solid sense that old Granther thinks it does?

"You're in Politics, you say," Granther said to Paxton. "Now that is what I'd call a worthwhile thing to save. From what I hear, this new culture doesn't pay too much attention to what we call politics. There's administration, naturally, and a sense of civic duty and all that sort of nonsense—but no real politics. Politics can be a powerful thing when you need to win a point."

"Politics is a dirty business far too often," Paxton answered. "It's a fight for power, an effort to override and overrule the principles and policies of an opposing body. In even its best phase, it brought about the fiction of the minority, with the connotation that the mere fact of being a minority carries with it the penalty of being to a large extent ignored."

"Still, it could be fun. I suppose it is exciting."

"Yes, you could call it that," said Paxton. "This last exercise we carried out was one with no holds barred. We had it planned that way. It was described somewhat delicately as a vicious battle."

"And you were elected President," said Nelson.

"That I was, but you didn't hear me say I was proud of it."

"But you should be," Grandma insisted. "In the ancient days, it was a proud thing to be elected President."

"Perhaps," Paxton admitted, "but not the way my party did it."

IT would be so easy, he thought, to go ahead and tell them, for they would understand. To say: I carried it too far. I blackened my opponent's name and character beyond any urgent need. I used all the dirty tricks. I bribed and lied and compromised and traded. And I did it all so well that I even fooled the logic that was the referee, which stood in lieu of populace and voter. And now my opponent has dug up another trick and is using it on me.

For assassination was political, even as diplomacy and war were political. After all, politics was little more than the short-circuiting of violence; an election was held rather than a revolution. But at all times the partition between politics and violence was a thin and flimsy thing.



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He finished off his brandy and put the glass down on the table.

Granther picked up the bottle, but Paxton shook his head.

"Thank you," he said. "If you don't mind, I shall go to bed soon. I must get an early start."

He never should have stopped here. It would be unforgivable to embroil these people in the aftermath of the exercise.

Although, he told himself, it probably was unfair to call it the aftermath—what was happening would have to be a part and parcel of the exercise itself.

The doorbell tinkled faintly and they could hear Elijah stirring in the hall.

"Sakes alive," said Grandma, "who can it be this time of night? And raining outdoors, too!"

It was a churchman.

He stood in the hall, brushing water from his cloak. He took off his broad-brimmed hat and swished it to shake off the raindrops.

He came into the room with a slow and stately tread.

All of them arose.

"Good evening, Bishop," said old Granther. "You were fortunate to find the house in this kind of weather and we're glad to have Your Worship."

The bishop beamed in fine, fast fellowship.

"Not of the church," he said. "Of the project merely. But you may use the proper terms, if you have a mind. It helps me stay in character."

Elijah, trailing in his wake, took his cloak and hat. The bishop was arrayed in rich and handsome garments.

Granther introduced them all around and found a glass and filled it from the bottle.

The bishop took it and smacked his lips. He sat down in a chair next to the fire.

"You have not dined, I take it," Grandma said. "Of course you haven't—there's no place out there to dine. Elijah, get the bishop a plate of food, and hurry."

"I thank you, madam," said the bishop. "I've had a long, hard day. I appreciate all you're doing for me. I appreciate it more than you can ever know."

"This is our day," Granther said merrily, refilling his own glass for the umpteenth time. "It is seldom that we have any guests at all and now, all of an evening, we have two of them."

"Two guests," said the bishop, looking straight at Paxton. "Now that is fine, indeed."

He smacked his lips again and emptied the glass.

## III

IN his room, Paxton closed the door and shot the bolt full home.



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The fire had burned down to embers and cast a dull glow along the floor. The rain drummed faintly, half-heartedly, on the window pane.

And the question and the fear raced within his brain.

There was no question of it: The bishop was the assassin who had been set upon his trail.

No man without a purpose, and a deadly purpose, walked these hills at night, in an autumn rain. And what was more, the bishop had been scarcely wet. He'd shaken his hat and the drops had fallen off, and he'd brushed at his cloak and after that both the hat and cloak were dry.

The bishop had been brought here, more than likely, in a hovering flier and let down, as other assassins probably likewise had been let down this very night in all of half a dozen places where a fleeing man might have taken shelter.

The bishop had been taken to the room just across the hall and under other circumstances, Paxton told himself, he might have sought conclusions with him there. He walked over to the fireplace and picked up the heavy poker and weighed it in his hand. One stroke of that and it would be all over.

But he couldn't do it. Not in this house.

He put the poker back and walked over to the bed and picked up his cloak. Slowly he slid it on as he stood there, thinking, going over in his mind the happenings of the morning.

He had been at home, alone, and the phone had rung and Sullivan's face had filled the visor — a face all puffed up with fright.

"Hunter's out to get you," Sullivan had said. "He's sent men to get you."

"But he can't do that!" Paxton remembered protesting.

"Certainly he can," said Sullivan. "It comes within the framework of the exercise. Assassination has always been a possibility . . ."

"But the exercise is finished!"

"Not so far as Hunter is concerned. You went a little far. You should have stayed within the hypothesis of the problem; there was no need to go back into Hunter's personal affairs. You dug up things he thought no one ever knew. How did you do it, man?"

"I have my ways," said Paxton. "And in a deal like this, everything was fair. He didn't handle me exactly as if I were innocent."

"You better get going," Sullivan advised. "They must be almost there. I can't get anyone there soon enough to help you."

AND it would have been all right, Paxton thought, if the flier had only held together.



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He wondered momentarily if it had been sabotaged.

But be that as it may, he had flown it down and had been able to walk away from it and now, finally, here he was.

He stood irresolutely in the center of the room.

It went against his pride to flee for a second time, but there was nothing else to do. He couldn't let this house become involved in the tag-end rough and tumble of his exercise.

And despite the poker, he was weaponless, for weapons on this now-peaceful planet were very few indeed — no longer household items such as *once* had been the case.

He went to the window and opened it and saw that the rain had stopped and that a ragged moon was showing through a scud of racing clouds.

GLANCING down, he saw the roof of the porch beneath the window and he let his eye follow down the roof line. Not too hard, he thought, if a man were barefoot, and once he reached the edge there'd be a drop of not much more than seven feet.

He took off his sandals and stuffed them in the pocket of his cloak and started out the window.

But, halfway out, he climbed back in again and walked to the door. Quietly he slid back the bolt. It wasn't exactly cricket to go running off and leave a room locked up.

The roof was slippery with the rain, but he managed it without any trouble, inching his way carefully down the incline. He dropped into a shrub that scratched him up a bit, but that, he told himself, was a minor matter.

He put on his sandals and straightened up and walked rapidly away. At the edge of the woods, he stopped and looked back at the house. It stood dark and silent.

Once he got back home and this affair was finished, he promised himself, he'd write Nelson a long apologetic letter and explain it all.

His feet found the path and he followed it through the sickly half-light of the cloudy moon.

"Sir," said a voice close beside him, "I see that you are out for a little stroll . . ."

Paxton jumped in fright.

"It's a nice night for it, sir," the voice went on quietly. "After a rain, everything seems so clean and cool."

"Who is there?" asked Paxton, with his hair standing quite on edge.

"Why, it's Pertwee, sir. Pertwee, the robot, sir."

Paxton laughed a little nervously. "Oh, yes, I remember now. You're Graham's enemy."



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THE robot stepped out of the woods into the path beside him.

"It's too much, I suppose," Pertwee said, "to imagine that you might be coming out to look at the battlefield."

"Why, no," said Paxton, grasping at a straw. "I don't know how you guessed it, but that's exactly what I'm doing. I've never heard of anything quite like it and I'm considerably intrigued."

"Sir," said the robot eagerly, "I'm entirely at your service. There is no one, I can assure you, who is better equipped to explain it to you. I've been in it from the very first with Master Graham, and if you have any questions, I shall try to answer them."

"Yes, I think there is one question. What is the purpose of it all?"

"Why, at first, of course," said Pertwee, "it was simply an attempt to amuse a growing boy. But now, with your permission, sir, I would venture the opinion that it is a good deal more."

"You mean a part of Continuation?"

"Certainly, sir. I know there is a natural reluctance among humankind to admit the fact, or to even think about it, but for a great part of Man's history war played an important and many-sided role. Of all the arts that Man developed, there probably was none to which he devoted so much time and thought and money as he did to war."

The path sloped down and there before them in the pale and mottled moonlight lay the battle bowl.

"That bowl," asked Paxton, "or whatever it might be that you have tipped over it? Sometimes you can just make it out and other times you miss it . . ."

"I suppose," said Pertwee, "you'd call it a force shield, sir. A couple of the other robots worked it out. As I understand it, sir, it is nothing new — just an adaptation. There's a time factor worked into it as an additional protection."

"But that sort of protection . . ."

"We use TC bombs, sir—total conversion bombs. Each side gets so many of them and uses his best judgment and . . ."

"But you couldn't use nuclear stuff in there!"

"As safe as a toy, sir," said Pertwee gaily. "They are very small, sir. Not much larger than a pea. Critical mass, as you well understand, no longer is much of a consideration. And the yield in radiation, while it is fairly high, is extremely short-lived, so that within an hour or so . . ."

"You gentlemen," said Paxton grimly, "certainly try to be entirely realistic."

"Why, yes, of course we do. Although the operators are entire-



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ly safe. We're in the same sort of position, you might say, as the general staff. And that is all right, of course, because the purpose of the entire business is to keep alive the art of waging war."

"But the art . . ." Paxton started to argue, then stopped.

WHAT could he say? If the race persisted in its purpose of keeping the old culture workable and intact in Continuation, then it must perforce accept that culture in its entirety.

War, one must admit, was as much a part of the human culture as were all the other more or less uniquely human things that the race was conserving here as a sort of racial cushion against a future need or use.

"There is," confessed Pertwee, "a certain cruelty, but perhaps a cruelty that I, as a robot, am more alive to than would be the case with a human, sir. The rate of casualties among the robot troops is unbelievable. In a restricted space and with extremely high firepower, that would be the natural consequence."

"You mean that you use troops —that you send robots in there?"

"Why, yes. Who else would operate the weapons? And it would be just a little silly, don't you think, to work out a battle and then . . ."

"But robots . . ."

"They are very small ones, sir. They would have to be, to gain an illusion of the space which is normally covered by a full-scale battle. And the weapons likewise are scaled down, and that sort of evens things out. And the troops are very single-minded, completely obedient and dedicated to victory. We turn them out in mass production in our shops and there's little chance to give them varying individualities and anyhow . . ."

"Yes, I see," said Paxton, a little stunned. "But now I think that I . . ."

"But, sir, I have only got a start at telling you and I've not shown you anything at all. There are so many considerations and there were so many problems."

They were close to the towering, fully shimmering force field now and Pertwee pointed to a stairway that led from ground level down toward its base.

"I'd like to show you, sir," said Pertwee, ducking down the stairs.

It stopped before a door.

"This," it said, "is the only entrance to the battlefield. We use it to send new troops and munitions during periods of truce, and at other times we use it to police up the place a bit."

Its thumb stabbed out and hit a button to one side of the door and the door moved upward silently.

"After several weeks of battle,"



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the robot explained, "the terrain is bound to become a little cluttered."

THROUGH the door, Paxton could see the churned-up ground and the evidence of dying, and it was as if someone had pushed him in the belly. He gulped in a stricken breath and couldn't let it out and he suddenly was giddy and nearly sick. He put out a hand to hold himself upright against the trenchlike wall beside him.

Pertwee pushed another button and the door slid down.

"It hits you hard the first time you see it," Pertwee apologized, "but given time, one gets used to it."

Paxton let his breath out slowly and looked around. The trench with the stairway came down to the door, and the door, he saw, was wider than the trench, so that at the foot of the steps the area had been widened into a sort of letter T, with narrow embrasures scooped out to face the door.

"You all right, sir?" asked Pertwee.

"Perfectly all right," Paxton told the robot stiffly.

"And now," said Pertwee happily, "I'll explain the fire and tactical control."

It trotted up the steps and Paxton trailed behind it.

"I'm afraid that would take too long," said Paxton.

But the robot brushed the words aside. "You must see it, sir," it pleaded plaintively. "Now that you are out here, you must not miss seeing it."

He'd have to get away somehow, Paxton told himself. He couldn't afford to waste much time. As soon as the house had settled down to sleep, the bishop would come hunting him, and by that time he must be gone.

Pertwee led the way around the curving base of the battle bowl to the observation tower which Paxton had come upon that evening.

The robot halted at the base of the ladder.

"After you," it said.

Paxton hesitated, then went swiftly up the ladder.

Maybe this wouldn't take too long, he thought, and then he could be off. It would be better, he realized, if he could get rid of Pertwee without being too abrupt about it.

The robot brushed past him in the darkness and bent above the bank of controls. There was a snick and lights came on in the panels.

"This, you see," it said, "is the groundglass — a representation of the battlefield. It is dead now, of course, because there is nothing going on, but when there is some action certain symbols are imposed upon the field so that one



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can see at all times just how things are going. And this is the fire control panel and this is the troop command panel and this . . ."

Pertwee went on and on with his explanations.

Finally it turned in triumph from the instruments.

"What do you think of it?" the robot asked, very clearly expecting praise.

"Why, it's wonderful," said Paxton, willing to say anything to make an end of his visit.

"If you are going to be around tomorrow," Pertwee said, "you may want to watch us."

And it was then that Paxton got his inspiration.

## IV

"AS a matter of fact," Paxton said, "I'd like to try it out. In my youth, I did a bit of reading on military matters, and if you'll excuse my saying so, I have often fancied myself somewhat of an expert."

Pertwee brightened almost visibly. "You mean, sir, that you'd like to go one round with me?"

"If you'd be so kind."

"You are sure you understand how to operate the board?"

"I watched you very closely."

"Give me fifteen minutes to reach my tower," said Pertwee. "When I arrive, I'll press the ready button. After that, either of us can start hostilities any time we wish."

"Fifteen minutes?"

"It may not take me that long, sir. I'll be quick about it."

"And I'm not imposing on you?"

"Sir," Pertwee said feelingly, "it will be a pleasure. I've fought against young Master Graham until the novelty has worn off. We know one another's tactics so well that there's little chance for surprise. As you can understand, sir, that makes for a rather humdrum war."

"Yes," said Paxton, "I suppose it would."

He watched Pertwee go down the ladder and listened to its footsteps hurrying away.

Then he went down the ladder and stood for a moment at the foot of it.

The clouds had thinned considerably and the moonlight was brighter now and it would be easier traveling, although it still would be dark in the denser forest.

He swung away from the tower and headed for the path, and, as he did so, he caught a flicker of motion in a patch of brush just off the trail.

Paxton slid into the denser shadow of a clump of trees and watched the patch of brush.

He crouched and waited. There was another cautious movement in the brush and he saw it was the bishop. Now suddenly it seemed that there was a chance



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to get the bishop off his neck for good — if his inspiration would only pay off.

The bishop had been let down by the flier in the dark of night, with the rain still pouring down and no moonlight at all. So it was unlikely that he knew about the battle bowl, although more than likely he must see it now, glittering faintly in the moonlight. But even if he saw it, there was a chance he'd not know what it was.

Paxton thought back along the conversation there had been after the bishop had arrived and no one, so far as he remembered, had mentioned a word of young Graham or the war project.

There was, Paxton thought, nothing lost by trying. Even if it didn't work, all he'd lose would be a little time.

He darted from the clump of trees to reach the base of the battle bowl. He crouched against the ground and watched, and the bishop came sliding out of his clump of brush and worked his way along, closing in upon him.

And that was fine, thought Paxton. It was working just the way he'd planned.

HE moved a little to make absolutely sure his trailer would know exactly where he was and then he dived down the stairs that led to the door.

He reached it and thumbed the button and the door slid slowly upward without a single sound. Paxton crowded back into the embrasure and waited.

It took a little longer than he had thought it would and he was getting slightly nervous when he heard the step upon the stairs.

The bishop came down slowly, apparently very watchful, and then he reached the door and stood there for a moment, staring out into the churned-up battlefield. And in his hand he held an ugly gun.

Paxton held his breath and pressed his shoulders tight against the wall of earth, but the bishop didn't even look around. His eyes were busy taking in the ground that lay beyond the door.

Then finally he moved, quickly, like a leopard. His silken garments made a swishing noise as he stepped through the door and out into the battle area.

Paxton held himself motionless, watching the bishop advance cautiously out into the field, and when he was far enough, he reached out a finger and pressed the second button and the door came down, smoothly, silently.

Paxton leaned against the door and let out in a gasp the breath he had been holding.

It was over now, he thought. Hunter hadn't been as clever as he had thought he was.

Paxton turned from the door



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and went slowly up the stairs.

Now he needn't run away. He could stay right here and Nelson would fly him, or arrange to have him flown, to some place of safety.

For Hunter wouldn't know that this particular assassin had hunted down his quarry. The bishop had had no chance to communicate and probably wouldn't have dared to even if he could.

On the top step, Paxton stubbed his toe and went down without a chance to catch himself, and there was a vast explosion that shook the universe and artillery fire was bursting in his brain.

Dazed, he got to his hands and knees and crawled painfully, hurling himself desperately down the stairs — and through the crashing uproar that filled the entire world ran an urgent thought and purpose:

*I've got to get him out before it is too late! I can't let him die in there! I can't kill a man!*

HE slipped on the stairs and slid until his body jammed in the narrowness and stuck.

And there was no artillery fire, there was no crash of shells, no wicked little chitterings. The dome glittered softly in the moonlight and was as quiet as death.

Except, he thought, a little weirdly, death's not quiet in there. It is an inferno of destruction and a maddening place of sound and brightness and the quietness doesn't come until afterward.

He'd fallen and hit his head, he knew, and all he'd seen and heard had been within his brain. But Pertwee would be opening up any minute now and the quietness would be gone, and with it the opportunity to undo what he had so swiftly planned.

And somewhere in the shadow of the dome another self stood off and argued with him, jeering at his softness, quoting logic at him.

It was either he or you, said that other self. You fought for your life the best way you knew, the only way you knew, and whatever you may have done, no matter what you did, you were entirely justified.

"I can't do it!" yelled the Paxton on the stairs and yet even as he yelled he knew that he was wrong, that by logic he was wrong, that the jeering self who stood off in the shadows made more sense than he.

He staggered to his feet. Without his conscious mind made up, he went down the stairs. Driven by some as yet unrealized and undefined instinctive prompting that was past all understanding, he stumbled down the stairs, with the throb still in his head and a choking guilt and fear rising in his throat.

He reached the door and stabbed the button and the door



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slid up and he went out into the cluttered place of dying and stopped in horror at the awful loneliness and the vindictive desolation of this square mile of Earth that was shut off from all the other Earth as if it were a place of final judgment.

And perhaps it was, he thought — the final judgment of Man.

Of all of us, he thought, young Graham may be the only honest one; he's the true barbarian that old Granther thinks he is; he is the throwback who looks out upon Man's past and sees it as it is and lives it as it was.

Paxton took a quick look back and he saw the door was closed and out ahead of him, in the plowed and jumbled sea of tortured, battered earth, he saw a moving figure that could be no one but the bishop.

Paxton ran forward, shouting, and the bishop turned around and stood there, waiting, with the gun half lifted.

Paxton stopped and waved his arms in frantic signaling. The bishop's gun came up and there was a stinging slash across the side of Paxton's neck and a sudden, gushing wetness. A small, blue puff of smoke hung on the muzzle of the distant gun.

PAXTON flung himself aside and dived for the ground. He hit and skidded on his belly and tumbled most ingloriously into a dusty crater. He lay there, at the bottom of the crater, huddled against the fear of a bullet's impact while the rage and fury built up into white heat.

He had come here to save a man and the man had tried to kill him!

I should have left him here, he thought.

I should have let him die.

I'd kill him if I could.

And the fact of the matter now was that he had to kill the bishop. There was no choice but to kill him or be killed himself.

Not only did he have to kill the bishop, but he had to kill him soon. Pertwee's fifteen minutes must be almost at an end and the bishop had to be killed and he had to be out the door before Pertwee opened fire.

Out the door, he thought — did he have a chance? If he ran low and dodged, perhaps, would he have a chance to escape the bishop's bullets?

That was it, he thought. Waste no time on killing if he didn't have to; let Pertwee do the killing. Just get out of here himself.

He put his hand up to his neck, and when he lifted it, his fingers were covered with a sticky wetness. It was funny, he thought, that it didn't hurt, although the hurt, no doubt, would come later.

He crawled up the crater's side



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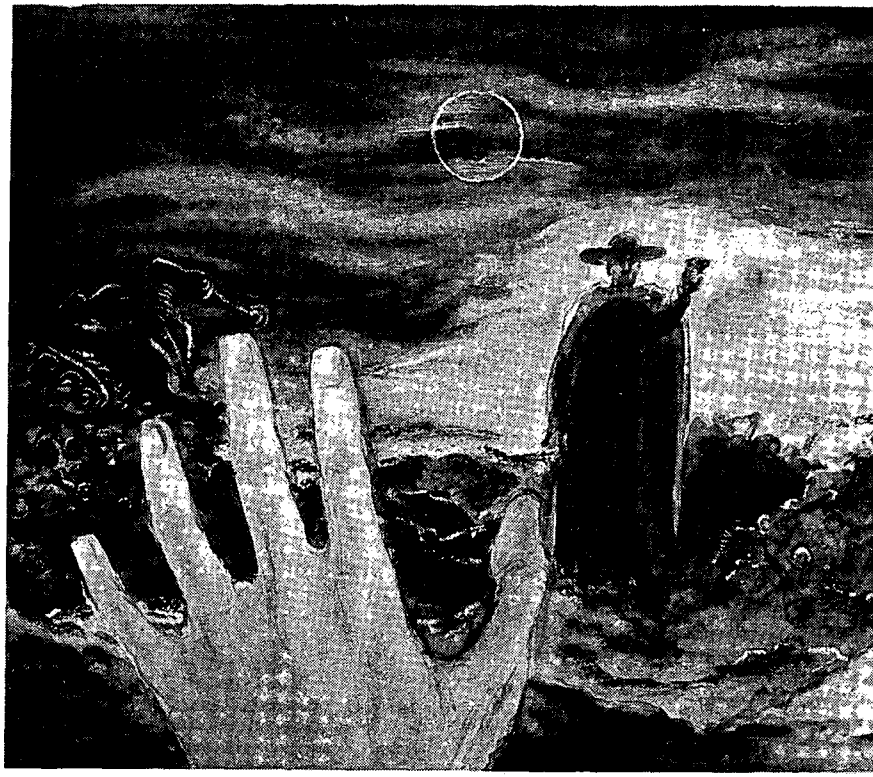

and rolled across its lip and found himself lying in a small, massed junkyard of smashed and broken robots, sprawled grotesquely where the barrage had caught them.

And lying there in front of him, without a scratch upon it, where it had fallen from a dying robot's grasp, was a rifle that shone dully in the moonlight.

He snatched it up and rose into a crouch and as he did he saw the bishop, almost on top of him; the bishop coming in to make sure that he was finished!

There was no time to run, as he had planned to — and, curiously, no desire to run. Paxton had never known actual hate before, never had a chance to know it, but now it came and filled him full of rage and a wild and exultant will and capacity to kill without pity or remorse.



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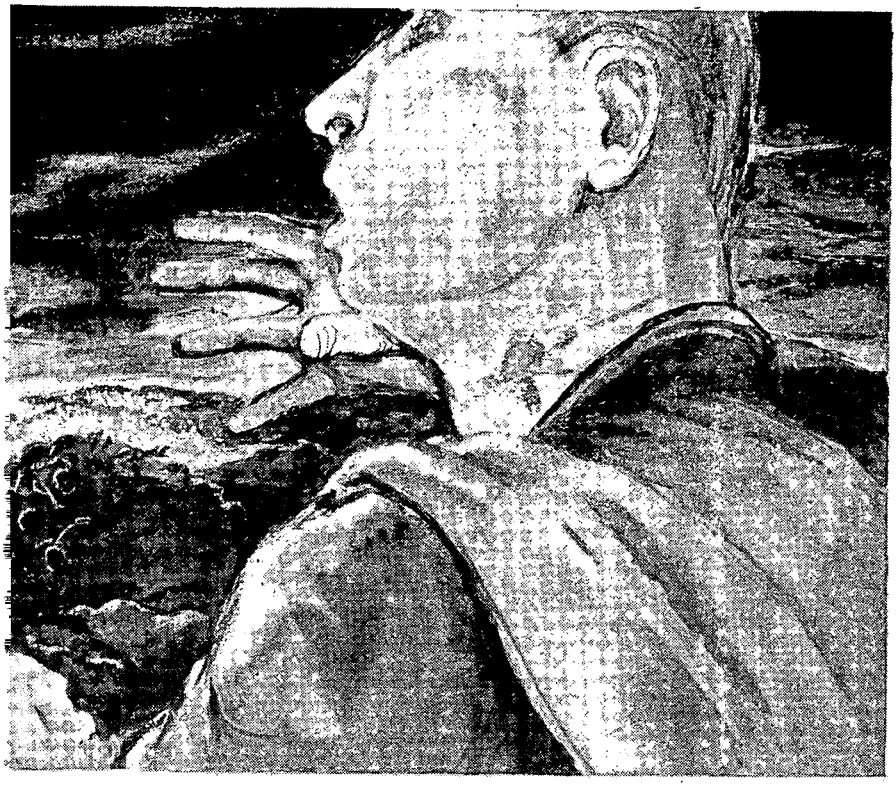

He tilted up the rifle and his finger closed upon the trigger and the weapon danced and flashed and made a deadly chatter.

BUT the bishop still came on, not rushing now, but plodding ahead with a deadly stride, leaning forward as if his body were absorbing the murderous rifle fire, absorbing it and keeping on by will power alone, holding off death until that moment when it might snuff out the thing that was killing it.

The bishop's gun came up and something smashed into Paxton's chest, and smashed again and yet again, and there was a flood of wetness and a spattering and the edge of Paxton's brain caught at the hint of something wrong.

For two men do not — could not — stand a dozen feet apart and



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pour at one another a deadly blast and both stay on their feet. No matter how poor might be their aim, it simply couldn't happen.

He rose out of his crouch and stood at his full height and let the gun hang uselessly in his hand. Six feet away, the bishop stopped as well and flung his gun away.

They stood looking at one another in the pale moonlight and the anger melted and ran out of them and Paxton wished that he were almost anywhere but there.

"Paxton," asked the bishop plaintively, "who did this to us?"

And it was a funny thing to say, almost as if he'd said: "Who stopped us from killing one another?"

For a fleeting moment, it almost seemed to Paxton as though it might have been a kinder thing if they had been allowed to kill. For killing was a brave thing in the annals of the race, an art of strength and a certain proof of manhood — perhaps of humanhood.

A kinder thing to be allowed to kill. And that was it, exactly. They had not been allowed to kill.

For you couldn't kill with a pop-gun that shot out plastic pellets of liquid that burst on contact, with the liquid running down like blood for the sake of realism. And you couldn't kill with a gun that went most admirably through all the motions of chattering and smoking and flashing out red fire, but with nothing lethal in it.

And was this entire battle bowl no more than a toy set with robots that came apart at the right and most dramatic moments and then could be put back together at a later time? Were the artillery and the total-conversion bombs toy things as well, with a lot of flash and noise and perhaps a few well-placed items to plow up the battlefield, but without the power to really hurt a robot?

THE bishop said, "Paxton, I feel like an utter fool." And he added other words which a real bishop could never bring himself to say, making very clear just what kind of obscene fool he was.

"Let's get out of here," said Paxton shortly, feeling like that same kind of fool himself.

"I wonder . . ." said the bishop.

"Forget about it," Paxton growled. "Let's just get out of here. Pertwee will be opening up . . ."

But he didn't finish what he was about to say, for he realized that even if Pertwee did open up, there'd be little danger. And there wasn't any chance that Pertwee would open up, for it would know that they were here.

Like a metal monitor watching over a group of rebellious children — rebellious because they weren't adult yet. Watching them and letting them go ahead and



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play so long as they were in no danger of drowning or of falling off a roof or some other reckless thing. And then interfering only just enough to save their silly necks. Perhaps even encouraging them to play so they'd work off their rebelliousness — joining in the game in the typically human tradition of let's pretend.

Like monitors watching over children, letting them develop, allowing them to express their foolish little selves, not standing in the way of whatever childish importance they could muster up, encouraging them to think they were sufficient to themselves.

PAXTON started for the door, plodding along, the bishop in his bedraggled robes stumbling along behind him.

When they were a hundred feet away, the door started sliding up and Pertwee stood there, waiting for them, not looking any different than it had before, but somehow seeming to have a new measure of importance.

They reached the door and sheepishly trailed through it, not looking right or left, casually and elaborately pretending that Pertwee was not there.

"Gentlemen," said Pertwee, "don't you want to play?"

"No," Paxton said. "No, thank you. I can't speak for both of us—"

"Yes, you can, friend," the bishop put in. "Go right ahead."

"My friend and I have done all the playing we care to do," said Paxton. "It was good of you to make sure we didn't get hurt."

Pertwee managed to look puzzled. "But why should anybody be allowed to get hurt? It was only a game."

"So we've discovered. Which way is out?"

"Why," said the robot, "any way but back."

— CLIFFORD D. SIMAK

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# PEOPLE SOUP

By ALAN ARKIN

***When you took pot luck with this kitchen scientist, not even the poor pot was lucky!***

Illustrated by JOHNSON

CONNIE came home from school and found her brother in the kitchen, doing something important at the sink. She knew it was important because he was making a mess and talking to himself. The sink drain was loaded down with open soda bottles, a sack of flour, corn meal, dog biscuits, molasses, Bromo-Seltzer, a tin of sardines and a box of soap chips. The floor was covered with drippings and every cupboard in the kitchen was open. At the moment, Bonnie's brother was putting all his energy into shaking a plastic juicer that was half-filled with an ominous-looking, frothy mixture.

Bonnie waited for a moment, keeping well out of range, and then said, "Hi, Bob."



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"Lo," he answered, without looking up.

"Where's Mom?"

"Shopping."

Bonnie inched a little closer. "What are you doing, Bob?" she asked.

"Nothing."

"Can I watch?"

"No."

Bonnie took this as a cue to advance two cautious steps. She knew from experience how close she could approach her brother when he was being creative and still maintain a peaceful neutrality. Bob slopped a cupful of ketchup into the juicer, added a can of powdered mustard, a drop of milk, six aspirin and a piece of chewing gum, being careful to spill a part of each package used.

Bonnie moved in a bit closer. "Are you making another experiment?" she asked.

"Who wants to know?" Bob answered, in his mad-scientist voice, as he swaggered over to the refrigerator and took out an egg, some old bacon fat, a capsuled vitamin pill, yesterday's Jello and a bottle of clam juice.

"Me wants to know," said Bonnie, picking up an apple that had rolled out of the refrigerator and fallen on the floor.

"Why should I tell you?"

"I have a quarter."

"Where'd you get it?"

"Mom gave it to me."

"If you give it to me, I'll tell you what I'm doing."

"It's not worth it."

"I'll let you be my assistant, too."

"Still not worth it."

"For ten cents?"

"Okay, ten cents."

SHE counted out the money to her brother and put on an apron. "What should I do now, Bob?"

"Get the salt," Bob instructed.

He poured sardine oil from the can into the juicer, being very careful not to let the sardines fall in. When he had squeezed the last drop of oil out of the can, he ate all the sardines and tossed the can into the sink.

Bonnie went after the salt and, when she lifted out the box, she found a package containing two chocolate graham crackers.

"Mom has a new hiding place, Bob," she announced.

Bob looked up. "Where is it?"

"Behind the salt."

"What did you find there?"

"Two chocolate grahams."

Bobby held out his hand, accepted one of the crackers without thanks and proceeded to crumble the whole thing into his concoction, not even stopping to lick the chocolate off his hands.

Bonnie frowned in disbelief. She had never seen such self-sacrifice. The act made her aware, for the



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first time, of the immense significance of the experiment.

She dropped her quarrel completely and walked over to the sink to get a good look at what was being done. All she saw in the sink was a wadded, wet Corn Flake box, the empty sardine tin and spillings from the juicer, which by this time was beginning to take on a distinctive and unpleasant odor. Bob gave Bonnie the job of adding seven pinches of salt and some cocoa to the concoction.

"What's it going to be, Bob?" she asked, blending the cocoa on her hands into her yellow corduroy skirt.

"Stuff," Bob answered, unbending a little.

"Government stuff?"

"Nope."

"Spaceship stuff?"

"Nope."

"Medicine?"

"Nope."

"I give up."

"It's animal serum," Bob said, sliced his thumb on the sardine can, glanced unemotionally at the cut, ignored it.

"What's animal serum, Bob?"

"It's certain properties without which the universe in eternity regards for human beings."

"Oh," Bonnie said. She took off her apron and sat down at the other end of the kitchen. The smell from the juicer was beginning to reach her stomach.

Bobby combed the kitchen for something else to throw into his concoction and came up with some oregano and liquid garlic.

"I guess this is about it," he said.

He poured the garlic and oregano into his juicer, put the lid on, shook it furiously for a minute and then emptied the contents into a deep pot.

"What are you doing now, Bob?" Bonnie asked.

"You have to cook it for seven minutes."

BOBBY lit the stove, put a cover on the pot, set the timer for ten minutes and left the room. Bonnie tagged after him and the two of them got involved in a rough game of basketball in the living room.

"BING!" said the timer.

Bob dropped the basketball on Bonnie's head and ran back into the kitchen.

"It's all done," he said, and took the cover off the pot. Only his dedication to his work kept him from showing the discomfort he felt with the smell that the pot gave forth.

"Fyew!" said Bonnie. "What do we do with it now? Throw it out?"

"No, stupid. We have to stir it till it cools and then drink it."

"Drink it?" Bonnie wrinkled her nose. "How come we have to drink it?"



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Bobby said, "Because that's what you do with experiments, stupid."

"But, Bob, it smells like garbage."

"Medicine smells worse and it makes you healthy," Bob said, while stirring the pot with an old wooden spoon.

Bonnie held her nose, stood on tiptoe and looked in at the cooking solution. "Will this make us healthy?"

"Maybe." Bob kept stirring.

"What will it do?"

"You'll see." Bob took two clean dish towels, draped them around the pot and carried it over to the formica kitchen table. In the process, he managed to dip both towels in the mixture and burn his already sliced thumb. One plastic handle of the pot was still smoldering, from being too near the fire, but none of these things seemed to have the slightest effect on him. He put the pot down in the middle of the table and stared at it, chin in hand.

Bonnie plopped down opposite him, put her chin in her hands and asked, "We *have* to drink that stuff?"

"Yup."

"Who has to drink it first?" Bob made no sign of having heard. "I thought so," said Bonnie. Still no comment. "What if it kills me?"

Bobby spoke by raising his whole head and keeping his jaw stationary in his hands. "How can it hurt you? There's nothing but pure food in there."

Bonnie also sat and stared. "How much of that stuff do I have to drink?"

"Just a litle bit. Stick one finger in it and lick it off."

Bonnie pointed a cautious finger at the tarry-looking brew and slowly immersed it, until it barely covered the nail. "Is that enough?"

"Plenty," said Bob in a judicious tone.

Bonnie took her finger out of the pot and stared at it for a moment. "What if I get sick?"

"You can't get sick. There's aspirin and vitamins in it, too."

Bonnie sighed and wrinkled her nose. "Well, here goes," she said. She licked off a little bit.

Bob watched her with his television version of a scientific look. "How do you feel?" he inquired.

Bonnie answered, "It's not so bad, once it goes down. You can taste the chocolate graham cracker." Bonnie was really enjoying the attention. "Hey," she said, "I'm starting to get a funny feeling in my—" and, before she could finish the sentence, there was a loud *pop*.

Bob's face registered extreme disappointment.

She sat quite still for a moment and then said, "What happened?"

"You've turned into a chicken."



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THE little bird lifted its wings and looked down at itself. "How come I'm a chicken, Bob?" it said, cocking its head to one side and staring at him with its left eye.

"Ah, nuts," he explained. "I expected you to be more of a pigeon thing." Bob mulled over the ingredients of his stew to see what went wrong.

The chicken hopped around the chair on one leg, flapped its wings experimentally and found itself on the kitchen table. It walked to the far corner and peered into a small mirror that hung on the side of the sink cabinet.

"I'm a pretty ugly chicken, boy," it said.

It inspected itself with its other eye and, finding no improvement, walked back to Bobby.

"I don't like to be a chicken, Bob," it said.

"Why not? What does it feel like?"

"It feels skinny and I can't see so good."

"How else does it feel?"

"That's all how it feels. Make me stop being it."

"First tell me better what it's like."

"I told you already. Make me stop being it."

"What are you afraid of? Why don't you see what it's like first, before you change back? This is a valuable experience."

The chicken tried to put its hands on its hips, but could find neither hips nor hands. "You better change me back, boy," it said, and gave Bob the left-eye glare.

"Will you stop being stupid and just see what it's like first?" Bob was finding it difficult to understand her lack of curiosity.

"Wait till Mom sees what an ugly mess I am, boy. Will you ever get it!" Bonnie was trying very hard to see Bob with both eyes at once, which was impossible.

"You're a sissy, Bonnie. You ruined the opportunity of a lifetime. I'm disgusted with you." Bob dipped his forefinger in the serum and held it toward the chicken. It pecked what it could from the finger and tilted its head back.

In an instant, the chicken was gone and Bonnie was back. She climbed down from the table, wiped her eyes and said, "It's a good thing you fixed me, boy. Would you ever have got it."

"Ah, you're nothing but a sissy," Bob said, and licked off a whole fingerful of his formula. "If I change into a horse, I won't let you ride me, and if I change into a leopard, I'll bite your head off." Once again, the loud *pop* was heard.

CONNIE stood up, wide-eyed. "Oh, Bob," she said, "you're beautiful!"



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"What am I?" Bob asked.

"You're a bee-yoo-tee-full St. Bernard, Bob! Let's go show Melissa and Chuck."

"A St. Bernard?" The animal looked disgusted. "I don't want to be no dog. I want to be a leopard."

"But you're *beautiful*, Bob! Go look in the mirror."

"Naah." The dog paddled over to the table.

"What are you going to do, Bob?"

"I'm going to try it again."

The dog put its front paws on the table, knocked over the serum and lapped up some as it dripped on the floor. *Pop* went the serum, taking effect. Bobby remained on all fours and kept on lapping. *Pop* went the serum again.

"What am I now?" he asked.

"You're still a St. Bernard," said Bonnie.

"The devil with it then," said the dog. "Let's forget all about it."

The dog took one last lap of serum. *Pop!* Bobby got up from the floor and dejectedly started out the back door. Bonnie skipped after him.

"What'll we do now, Bob?" she asked.

"We'll go down to Thrifty's and get some ice cream."

They walked down the hill silently, Bobby brooding over not having been a leopard and Bonnie wishing he had stayed a St. Bernard. As they approached the main street of the small town, Bonnie turned to her brother.

"You want to make some more of that stuff tomorrow?"

"Not the same stuff," said Bob.

"What'll we make instead?"

"I ain't decided yet."

"You want to make an atomic bomb?"

"Maybe."

"Can we do it in the juicer?"

"Sure," Bob said, "only we'll have to get a couple of onions."

— ALAN ARKIN


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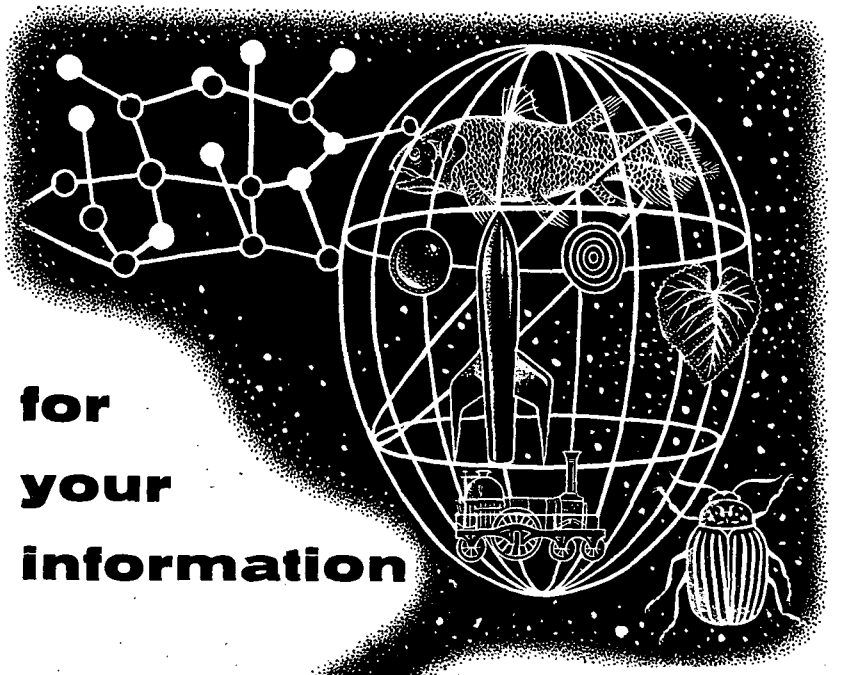

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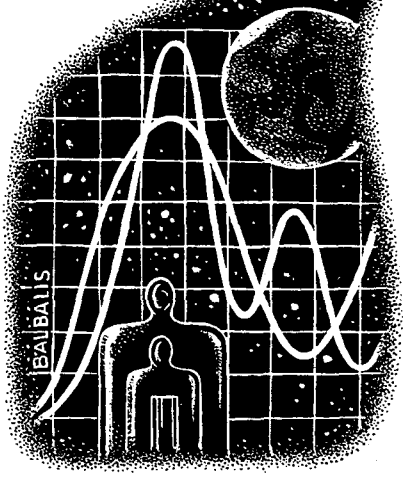


## The First Spaceship

LIKE last month's column, this one also deals exclusively with questions that were directed at me recently, either by mail or in person, the latter usually after lectures and other public appearances. They all deal with space travel and artificial satellites. I did not select them that way; that's the way they came. As a book publisher "con-



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fided" to me over lunch: "Interest in space travel seems to be high." It is.

The first question, not the first that came to me but the first I am going to answer, concerned the first spaceship. The wording used was "Who designed the first spaceship?" and that took me a little by surprise since there aren't any yet. Fortunately the meaning of the question was explained quickly. There have been quite a number of space travel stories, some a good deal more than fifty years old, the correspondent continued. But these were all stories; their authors did not have to defend the scientific validity of their descriptions. But who was the first man to design a spaceship and to say that he thought space travel possible and believed that his design could do it?

The answer to that question is that I knew the man who did. He was a German inventor by the name of Hermann Ganswindt, who was a rather aged gentleman at the time I met him — he had been born on June 12, 1856, and our first meeting took place in early summer of 1929.

STRESSING his age at the time is not supposed to produce the impression that I met a frail old man, troubled by bad health and too many memories. Hermann Ganswindt may have been sick occasionally during his life, as happens to everybody, but his health was fine. He was around six feet one inch or two inches tall and must have weighed more than 220 pounds. He moved energetically and thought nothing of staying up until two A.M. His eyes were coal black and so was what was left of his hair and his beard. Just one year before I met him, he had become a father for the twenty-third time (two marriages) and boasted that his youngest son was younger than his youngest grandchild. He had a voice that one would expect of a man his size. And though he was full of memories, they did not trouble him a bit.

*Why* I met him is also characteristic. At that time there were, in Germany, two theoretical works on space travel. One was by Professor Hermann Oberth (now in Huntsville, Alabama) and the other was by the late Dr. Walter Hohmann (victim of a bombing raid in World War II). Professor Robert H. Goddard's book, it may be mentioned in passing, was known to exist but was not in the libraries and could not be bought — I tried it twice, once directly and once through a bookstore. In addition to these two highly technical works, there were three popularizations, one by Max Valier, one by Otto Willi Gail and one by Willy Ley.



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One day Oberth, Valier and Gail received letters from Hermann Ganswindt, couched in legal language and requesting that he be mentioned as a forerunner when these books should be reprinted. Dr. Hohmann and myself did not receive such letters; I don't know why. One of the results of these letters was that Otto Willi Gail (now also deceased) went to see Ganswindt, interviewed him at length and wrote six syndicated newspaper columns about him. After they had appeared, he suggested to me that I do the same.

Before I got around to it, I received an invitation from Fritz Lang to have lunch with him at the Ufa studios and to see the moon landscape he had built for the filming of his *Girl in the Moon*. Professor Oberth was there and so was Hermann Ganswindt. Ganswindt, walking around in the scenery, told me and whoever else was willing to listen that he had invented the following items: the dirigible, the helicopter, the horseless carriage, the motorboat, the free-wheeling mechanism of the bicycle, and the spaceship. This was not just boasting; he had had early concepts of all these things.

Naturally he was not the first to think of a dirigible, but he claimed that he had been the first to think of one that would have worked, if built. (Possibly true.) He did believe that he was the first to think of a helicopter and said that it had failed to work merely because he had been unable to buy a sufficiently powerful engine. In this he was wrong. Others had thought of helicopters before him and his would not have worked, even with a powerful engine. Hopelessly unstable, it probably would have crashed by sideslipping before it reached 20 feet altitude.

Ganswindt also said that he had been the first to speak about a spaceship seriously, and in this he was right. I later found among his papers a printed lecture program with a date from the year 1891; Ganswindt said that this was one of his later lectures, which could easily be correct.

WHATEVER ill feelings he might have harbored against me originally, for not mentioning him in my first book, evaporated quickly and thoroughly when I explained that, while I knew his name (which was true), I had never heard that he had tried to invent a spaceship. I later realized that I had read about that at one time in a kind of boy's annual that used to be (and now is again) published in Germany every year at about Christmas. Ganswindt invited me to his home. The picture hanging over the upright



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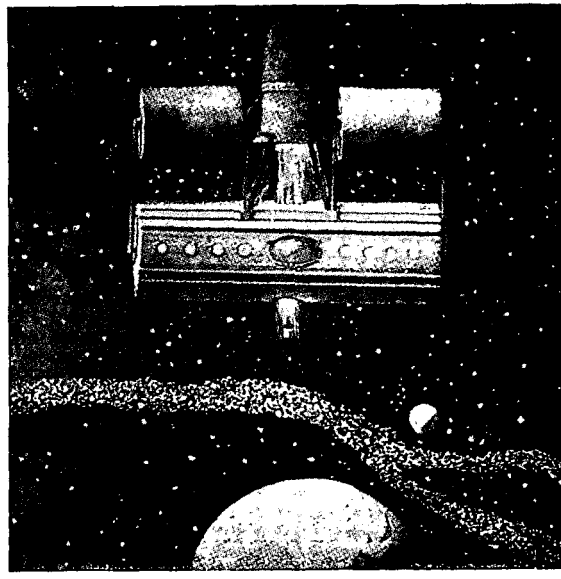

**Hermann Ganswindt's spaceship**

piano (reproduced here) was that of his spaceship. I examined it carefully, hoping to find a date. There was none, but the aging of the picture and its style both dated it as about 1890.

The idea was this: the passenger cabin was supported (on springs) from the bell-shaped combustion chamber. The fuel supply was stored in two drums to the right and left of the combustion chamber. The fuel was to consist of steel capsules; at any rate, this term comes closest to what Ganswindt had in mind. He explained it to me in more detail, but of course I can't vouch that he had explained it the same way in 1890.

Imagine a sandwich made of two silver dollars with a thin slice of dynamite between them. For "silver dollars" read "steel disks" of considerable thickness, but about the size of a dollar piece. (Ganswindt did not say "silver dollars" — he said five-mark pieces, but the Imperial German five-mark piece and the silver dollar are very nearly the same size and weight.) These metal-plus-high-explosive sandwiches were to be fed into the chamber one by one,



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to be exploded there. The lower disk would drop through a well in the passenger cabin immediately; the upper disk would hit the inside of the bell-shaped chamber and transmit its energy to it before dropping out.

When the ship was under way, the combustion feeding would be stopped. Then the passenger cabin would begin rotating around its center well, so that the two flat ends would become the two floors. Ganswindt knew that weightlessness would take place as soon as the acceleration stopped, and he had figured out that centrifugal force could replace gravity.

That is as far as Ganswindt went. He had other plans and other worries too. But he was right to insist on being mentioned in the books as a forerunner. He was one.

After spending several evenings with Ganswindt, I did write up his life story. It was to be one of those full-page newspaper features which are customary in Europe. I took it to a newspaper editor who often printed my pieces. He called me up a few days later and said that he had read it and liked it, but that he was not going to print it. There was no reason to print it at the time. Then he continued by saying: "Look, I have nothing against the old gentleman and I wish him well. But he is old, and if you want me to, I'll keep the piece and pay you now and publish it as an obituary."

Well, no, this is not how it happened, even though I said yes with some hesitation. Hermann Ganswindt did die about three years after this conversation (on October 25, 1934), but my full-page feature article about him was not published.

In the meantime, Hitler had come to power and all non-Nazi papers had been banned. I don't know if the unpublished manuscripts were simply destroyed or whether they were neatly filed somewhere to be used as evidence if and when necessary. I still have the carbon copy.

## THE VELOCITY OF A SATELLITE IN ORBIT

I THINK I am fully justified in assuming that many of my readers have saved a few newspaper clippings about the artificial satellites, especially the tabulations giving their weights and dimensions. In case you did, get one of these tabulations out and check the column which gives their velocity in orbit. You'll see that each and every one of them bears the label 18,000 miles per hour.

There are three statements one can make about that figure. Statement number one is that it is wrong. Statement number two is


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that it is impossible. And statement number three is that this figure has, by now, achieved the status of an unliterary convention, like the saying about the fifty million Frenchmen who cannot be wrong, which is wrong on three counts too. In the first place, there are only 43 million Frenchmen in France; in the second, they rarely agree on anything; thirdly, mere numbers are not proof of correctness.

Of course everybody hearing that this famous figure of 18,000 miles per hour is wrong has a perfect right — in fact almost an obligation — to ask about the correct figure. And that is where the trouble starts. There is not *one* correct figure. There are hundreds, even thousands, of them. It all depends on the case. To begin somewhere, let us see where this figure of 18,000 miles per hour comes from. Does it hold true in any specific case?

The answer is no, and the most one can say for this figure is that it is the result of multiplying 3600 by 5. The reason for these two figures is that 3600 is the number of seconds in one hour while the "5" is supposed to be the velocity of the satellite in miles per second.

Now everybody knows, or at least should know, that an artificial satellite has to move the faster the nearer it is to the ground. The highest velocity, then, would be required of a satellite which races around the Earth at sea level. Let us assume that no continents, mountains or buildings are in the way and that air resistance has been removed by magic. How fast would it have to move then? The answer is 7914 meters per second, which is precisely 4.973,445 miles per second or 17,904.4 miles per hour.

Since you cannot have a sea-level satellite in reality, every satellite which is actually possible would have to move more slowly than that, or else it would not stay in orbit.

The next question is obviously how low a real satellite can be placed and how fast it would be in that fastest possible orbit.

I was confronted with that question a fair number of years ago for a rather unlikely reason. The year in question happened to be the seventy-fifth anniversary of the publication of Jules Verne's *Around the World in Eighty Days* and a magazine editor wanted an article about this.

There were a number of things to be investigated for the purpose of this article. How fast could you get around the Earth nowadays, using any means of transportation except flying? How fast could you get around the Earth using commercial airliners only, no special flights, please? How fast could you



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do it with special flights? The idea was: could it be done in eight days, instead of eighty days? (The answer was yes, using commercial airliners only.) Could it be done in eighty hours? (Not when the article was written, but it might be possible now.)

THEN the question came up: could a rocket do it in eighty minutes? Strangely enough, it did not occur to me at the time just to calculate the sea-level satellite first, in which case I would have found out quickly that even at sea level it takes more than eighty minutes. I calculated two other orbits first, coming closer and closer, and did not hit on the sea-level orbit until I had convinced myself that an orbit 20 miles up would need just about 85 minutes. The satellite at sea level would take about two minutes less.

Although the question of whether it could be done in eighty minutes was not asked for scientific reasons, it is nevertheless true that scientific calculations also start out with the question of the orbital period. There is a very good practical reason for this. If you establish a satellite in a permanent orbit, an orbit that does not touch the atmosphere at any point, you want to check on it. This checking can be most easily accomplished if the satellite passes over a given point at a given time. This, in turn, means that the orbital period of the satellite must be a definite fraction of the 24 hours which the Earth needs to turn on its axis. In other words, you want a satellite which will make a certain number of *complete* revolutions around the Earth in 24 hours.

The research satellites which we now have don't do that, and it might be worth emphasizing that there is no need for this. For research purposes, any orbit will do; you want to learn something and you can learn something from any orbit, provided it is observed carefully.

But for a satellite which has a purpose other than research — say one for navigational purposes — you want a nearly circular orbit with a period which results in complete revolutions. It does not matter much whether that satellite makes 16 or 12 or 10 or only 6 revolutions per day. It does matter that they are complete revolutions, with no fractions left over.

It is for this reason that the question about the orbital period comes first. A period of 1 hour 39 minutes and 23.4 seconds would be awkward to handle. But an orbital period of 90 minutes would give you 16 complete revolutions, a period of 120 minutes would give you 12 complete revolutions, a period of 2 hours and 24 minutes would produce 10



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complete revolutions, a 3-hour period 8 revolutions, a 4-hour period 6 revolutions, and so forth.

The first of the ones just mentioned would have to be at an altitude of 174 miles. That would produce an orbital period of 90 minutes, and 16 complete revolutions, with an orbital velocity of 4.815 miles per second. Only one year ago, the question of whether 174 miles is high enough to avoid even residual air resistance would have been answered in the affirmative without any hesitation. Now, after the first half-dozen artificial satellites have been in various orbits, this answer would be a little less positive. It is still likely that a 90-minute orbit would be stable, but nobody would be too surprised if somebody were to prove that it is not.

NEXT one farther out, Wernher von Braun's two-hour orbit, is still considered safe. There you would have 1050 miles between you and the ground (the slight disagreement in such figures that you can find are ultimately based on the diameter assigned to the Earth, and they are of little practical importance) and an orbital velocity of 4.374 miles per second. To make ten complete revolutions around the Earth, you would have to be just a mile or so less than 1700 miles from the ground, which would produce an orbital period of 2 hours 24 minutes with an orbital velocity of 4.113 miles per second. For the three-hour orbit, you would have to be 2600 miles from the ground and would have to move at the rate of 3.821 miles per second to stay in that orbit. Finally, for the four-hour orbit, the distance would have to be very nearly 4000 miles away (the precise figure, as now calculated, is 3993 miles) and the orbital velocity would be 3.473 miles per second.

You can see how far we have removed ourselves from those standard 18,000 miles per hour or 5 miles per second.

Since we are going more and more slowly, one might ask just how slow a satellite might go and still be a satellite. At a distance of 46,000 miles from the Earth's surface, the orbital velocity would be down to 1.39 miles per second and the satellite would need 2 days and almost 15 hours for one complete revolution. At twice the distance, the orbital velocity would be down to 0.89 miles per second (or 4700 feet per second) while the orbital period would be up to 8 days and nearly 5 hours. Again doubling the distance reduces the orbital velocity to 0.69 miles per second (3650 feet per second) and increases the orbital period to 21 days.

Of course we can't go on doubling the distance as we have been



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doing, for there must come a point where the Earth's gravitational field is no longer powerful enough to hold the satellite. That maximum distance, according to Dr. Robert S. Richardson, is 923,000 miles from the Earth's surface, resulting in an orbital period of 210 days. The orbital velocity would be 1700 feet per second.

Beyond this distance, you can't have a satellite of Earth. If you tried to put one farther out, say at a distance of 1,500,000 miles, it would not stay a satellite of Earth. It would be snatched by the Sun and orbit as a very minor planet.

## WHY AN ELLIPTICAL ORBIT?

THE question I get most frequently is the one asked in the sub-head. No matter how often I explain it, in writing, in person or on television, I can be sure that on the very next day somebody will write or telephone or buttonhole me and ask: "The one thing I can't understand is why those orbits are ellipses."

I never give the answer I really want to give. What I want to say is "Because they are." Or else "Because Kepler said so." Instead of speaking my mind, I sigh (sometimes audibly) and reach for a pencil or a piece of chalk and say: "This circle is meant to represent the Earth. This dotted line around it is meant to represent the orbit of a satellite. Never mind how sloppily it is drawn, it is supposed to be a mathematical circle. Now, in a circular orbit, the velocity is the same for every point of the orbit. If that satellite were at a distance of 560 miles, the velocity has to be 4.6 miles per second. If it is less, the satellite will approach the Earth; if it is more, the satellite will recede from the Earth.

"If it recedes, it will climb against the Earth's gravitational pull. That will reduce its velocity. So it will come to a point where its actual velocity is less than it would have to have to go into an orbit at that distance. This means that gravity will win and it will approach the Earth again. But in approaching the Earth, the satellite gains velocity. So it will grow to be too fast to go into an orbit at the distance at which it now finds itself. Hence it will recede again and this will go on and on until an external force, such as air resistance, intervenes and changes the picture."

In repeating this standard explanation, I have omitted the blank looks which interrupt it at random points, and I have also omitted the repetitions I put in because of these blank looks. After all, the advantage of the printed word is that every reader



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can go over a printed sentence as often as he wants.

The point where I sometimes was tripped came when the person said brightly: "Yes, now I see why this would come out as an ellipse and why the satellite would be slowest when it is farthest from the Earth and fastest when it is nearest to the Earth. Can you tell me a few figures?" No, I couldn't. I knew a number of figures applying to circular orbits, but every elliptical orbit is different and would have to be calculated separately. Which is something one can't do standing on a lecture platform or sitting in front of a television camera.

However, now I can give figures for at least some cases. Professor Dr. Karl Schütte of the German Society for Rocket and Space Research has published a table in his recent book *Die Weltraumfahrt hat begonnen* ("Space Travel Has Begun") which will be most helpful for such occasions.

BUT before you look at the table, read these explanations. The assumption is that you have an artificial satellite in an orbit around the Earth, a circular orbit which is as far down as air resistance will permit. Its velocity in orbit will be less than 4.9 miles per second; how much less would depend on the altitude. Now it is assumed that the velocity of this satellite is increased by rocket power, producing a new and higher velocity which is given in the first column.

This new velocity sends the satellite into an elliptical orbit. In the elliptical orbit, this new velocity becomes the perigee velocity which the satellite will have every time it goes through its perigee near the original circular orbit. The second column then shows where the apogee of the new orbit will be, meaning how far it will go away in its new orbit. The third column gives the velocity in miles per second at the apogee, where the satellite is slowest. The last column, finally, gives the orbital period.

The last line on Table I represents a case where just about 1.6 miles per second have been added to the orbital velocity which the satellite had to begin with, and this addition of just about one-third of the orbital velocity produces an ellipse that will go nearly 40,000 miles out. One other thing which is worth pointing out is the increasing discrepancy between perigee and apogee velocities (first and third columns) as the ellipse lengthens.

But what is really amazing is what follows after the velocity has gone to the level of 6.6 miles at perigee. (*See* Table II.) If you look at the first column of figures carefully, you'll also note that the



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## TABLE I

| Velocity at Perigee (miles p. sec.) | Distance of Apogee from Surface (miles) | Velocity at Apogee (miles p. sec.) | Orbital Period d. | h. | m. |
|---|---|---|---|---|---|
| 4.971 | 178.3 | 4.757 | | 1. | 27.2 |
| 5.095 | 598.0 | 4.397 | | 1 | 34.6 |
| 5.219 | 1149.3 | 4.046 | | 1 | 43.4 |
| 5.344 | 1745.0 | 3.706 | | 1 | 53.8 |
| 5.468 | 2453.3 | 3.777 | | 2 | 6.5 |
| 5.592 | 3289.6 | 3.056 | | 2 | 22.0 |
| 5.717 | 4296.2 | 2.744 | | 2 | 41.6 |
| 5.841 | 5524.6 | 2.440 | | 3 | 6.8 |
| 5.965 | 7066.6 | 2.143 | | 3 | 40.7 |
| 6.089 | 9060.2 | 1.856 | | 4 | 24.8 |
| 6.214 | 11,691.8 | 1.573 | | 5 | 28.6 |
| 6.338 | 13,875.7 | 1.291 | | 7 | 7.0 |
| 6.462 | 21,366.4 | 1.011 | | 9 | 59.4 |
| 6.524 | 25,144.1 | 0.889 | | 11 | 59.0 |
| 6.586 | 30,549.4 | 0.756 | | 15 | 2.0 |
| 6.649 | 38,159.2 | 0.626 | | 19 | 43.0 |

## TABLE II

| Velocity at Perigee (miles p. sec.) | Distance of Apogee from Surface (miles) | Velocity at Apogee (miles p. sec.) | Orbital Period d. | h. | m. |
|---|---|---|---|---|---|
| 6.711 | 49,164.7 | 0.496 | 1 | 3 | 32 |
| 6.773 | 69,013.7 | 0.367 | 1 | 18 | 32 |
| 6.835 | 108,536.4 | 0.241 | 3 | 7 | 12 |
| 6.847 | 121,952.1 | 0.216 | 3 | 21 | 36 |
| 6.854 | 129,918.5 | 0.203 | 4 | 6 | 0 |
| 6.860 | 138,915.2 | 0.190 | 4 | 16 | 6 |
| 6.866 | 149,180.5 | 0.178 | 5 | 4 | 6 |
| 6.872 | 160,990.7 | 0.165 | 5 | 18 | 18 |
| 6.878 | 174,743.9 | 0.153 | 6 | 11 | 30 |
| 6.885 | 190,953.3 | 0.140 | 7 | 8 | 42 |
| 6.891 | 210,334.7 | 0.127 | 8 | 11 | 12 |
| 6.897 | 233,916.0 | 0.112 | 9 | 21 | 0 |
| 6.903 | 263,285.1 | 0.103 | 11 | 17 | 30 |
| 6.909 | 300,738.7 | 0.065 | 14 | 5 | 48 |



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velocity increases from case to case are less than they were before.

The last line, you may have noticed, is one where just two miles per second have been added to the original orbital velocity, but the result of this addition is an apogee far beyond the distance of the Moon.

The low apogee velocities for the longest orbits are also amazing. This may show more strongly if they are expressed in feet per second. At the apogee of the orbit that extends to 174,744 miles, the velocity is a mere 800 feet per second; at the apogee of the orbit that goes to 234,000 miles, the velocity is 580 feet per second; and at the apogee of the last example in the table, it is 343 feet per second, less than the cruising speed of an airliner.

One of the reasons I have quoted Professor Schütte's table is that some of these orbits will be used in the near future. There are various reasons why it would be practical (though not theoretically superior) to put a so-called probe into an orbit first, an ordinary satellite orbit near the Earth, before radioing the firing command to the top stage of the rocket assembly. Likewise, at a later date, the first manned trips into deeper space are also likely to follow such orbits because they, too, are going to start with normal orbiting.

And, finally, anything that will be sent out from a space station would follow such an orbit because the space station will be in a circular orbit, so that every probe from the station will just add to the orbital velocity it has.

## HOW SECRET WAS SPUTNIK NO. 1?

I HAVE just returned from Portland, Oregon, where, among a few dozen other things, I also spent an evening with the local moonwatch team. They told me something that I had not known before. Around the middle of September, 1957, radio hams in the Portland area learned from their opposite numbers in Japan that the Soviet government had informed the Japanese radio hams and moonwatchers that their first satellite would broadcast on such and such a wave length so that they could check their receiving equipment and tune in properly.

While the younger and more active citizens could tell me stories like this, their elders still expressed astonishment about the surprising appearance of Sputnik No. 1. Knowing that the word "surprise" can have several shades of meaning, I was careful to find out just what they meant. Did they mean they were surprised that an artificial satellite was possible at all? Well, yes, that too, but they meant



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they were surprised because *nobody* had *ever* said anything about a forthcoming Russian artificial satellite.

All I could say at the moment was that I had known about a Russian satellite program for quite some time. It had been mentioned as a part of the IGY for nearly as long as the American Vanguard program.

AFTER my return to New York, I decided to check on the obscurity of the Russian satellite program and I restricted my checking to such sources that anybody could and most likely would see. In other words, I ruled out foreign publications and all printed matter that could not be bought at a newsstand, as for example newsletters and circulars of professional societies of one type or another. To be even more rigid, I also ruled out any publication, of whatever type, which had appeared prior to the announcement of the Vanguard Project. The reason for this was that I expected eyes to have been sharpened for satellite news after the Vanguard announcement, no matter how dull said eyes may have been before.

Here is what I found:

*Exhibit A.* The October 31, 1955, issue of *Aviation Week* contained a report which was nearly one full page, dealing with an article by Professor Kyrill Stanyúkovitch, reporting on Project Vanguard to the Russians, ending with the words "Russian engineers believe that it is possible to build larger satellites than those being discussed now in the Western Press."

*Exhibit B.* The October 29, 1956, issue of the same magazine with a report on an article in the *Moscow News* by Professor Georgi Pokrovsky which stated that the Russian satellite would have a diameter of 24 inches, a weight of about 100 pounds, and that the perigee of its orbit would be at 185 miles and the apogee at 810 miles. (Actual figures for Sputnik No. 1: diameter 23.8 inches, weight 184 pounds, orbit 156 to 560 miles.)

*Exhibit C. The New York Times,* issue of June 2, 1957. Contained report on an article in *Pravda* by Professor Alexander Nesmenyánov, president of the Soviet Academy of Sciences, stating "We have created the rockets and all the equipment and instruments necessary to solve the problem of the artificial earth satellite."

*Exhibit D.* The June 9, 1957, issue of the same newspaper, containing an article about an article in the *Literaturnaya Gazyeta* which told about the Russian "space dogs," trained from puppyhood for rocket and satellite flight.

*Exhibit E. The New York Times,* issue of June 20, 1957, containing an interview with several Russian



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scientists, all predicting "several" Soviet satellites for the IGY.

*Exhibit F.* The July 29, 1957, issue of *Aviation* Week with an account of a three-day symposium of the Royal Aeronautical Society where Milton Rosen reported on the Vanguard Program and Professor Boris Petrov stated that the Russian Earth satellites would be launched at a considerable angle to the equator, as close to a meridian (pole to pole) shot as possible. Professor Petrov's speech was news only because it was in the form of a lecture; he repeated what had been said in an official Russian document handed to IGY headquarters in Uccle (Belgium) in June. Excerpts from this document had been carried by the major newspaper of all the 64 nations participating in the IGY.

*Exhibit G. Reuter's Wire Service,* August 3, 1957, distributed worldwide a dispatch stating that Professor Evgenii Fyedorov had been officially named head of the Russian satellite program. Professor Fyedorov was quoted as saying that the satellites would be shot at dawn (which was done), that a three-stage rocket would be used (which was done), and that they wanted a 90-minute orbit (turned out to be 93 minutes).

A week or so prior to this dispatch, a Russian radio magazine carried full information about the transmitters and wave lengths to be used.

I no doubt missed a few items, but this should have been enough information for anybody. If somebody tells me that he has the rockets to shoot — which we knew from other sources, anyway — and tells me what he will shoot, how he will shoot it, and in general says virtually everything except for the precise date — well, what should I feel like if I'm surprised when the man shoots?

— WILLY LEY


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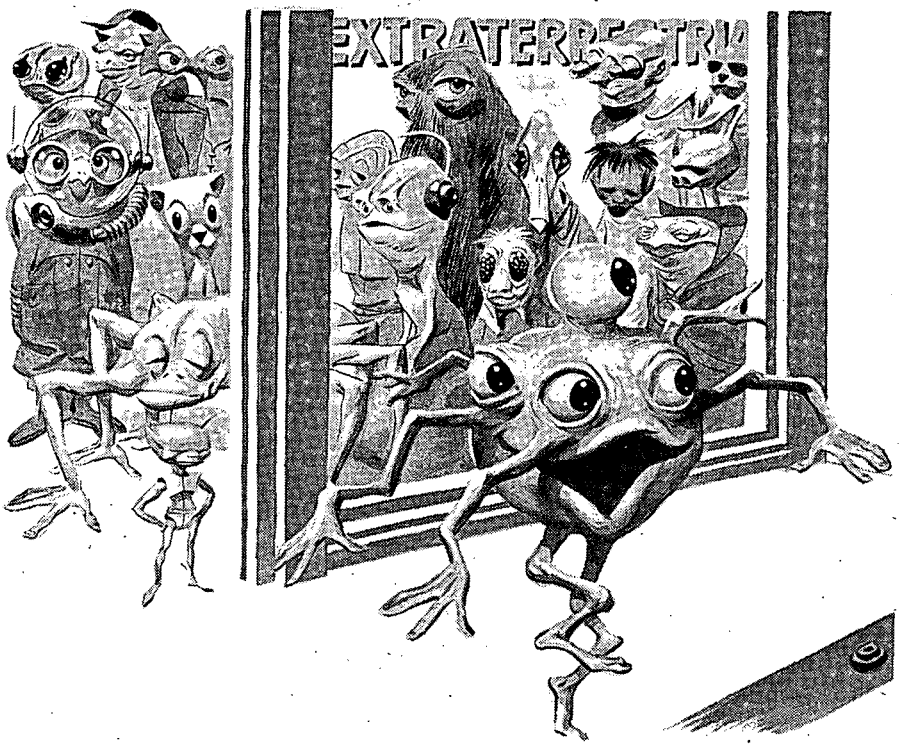
# Birds of a

***Getting specimens for the interstellar zoo was no problem — they battled for the honor — but now I had to fight like a wildcat to keep a display from making a monkey of me!***





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# Feather

**By ROBERT SILVERBERG**

**Illustrated by WOOD**

IT was our first day of recruiting on the planet, and the alien life-forms had lined up for hundreds of feet back from my rented office. As I came down the block from the hotel, I could hear and see and smell them with ease.

My three staff men, Auchinleck, Stebbins and Ludlow, walked shieldwise in front of me. I peered between them to size the crop up. The aliens came in every shape and form, in all colors and textures — and all of them eager for a Corrigan contract. The Galaxy is full of bizarre beings, but there's barely a species anywhere that can resist the old exhibitionist urge.

"Send them in one at a time," I told Stebbins. I ducked into the office, took my place back of the desk and waited for the procession to begin.

The name of the planet was MacTavish IV (if you went by the official Terran listing) or Ghryne (if you called it by what its people were accustomed to calling it). I thought of it privately as MacTavish IV and referred to it publicly as Ghryne. I believe in keeping the locals happy wherever I go.

Through the front window of the office, I could see our big gay tridim sign plastered to a facing wall: WANTED — EXTRATERRESTRIALS! We had saturated MacTavish IV with our promotional



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poop for a month preceding arrival. Stuff like this:

*Want to visit Earth — see the Galaxy's most glittering and exclusive world? Want to draw good pay, work short hours, experience the thrills of show business on romantic Terra? If you are a non-terrestrial, there may be a place for you in the Corrigan Institute of Morphological Science. No freaks wanted — normal beings only. J. F. Corrigan will hold interviews in person on Ghryne from Thirdday to Fifthday of Tenmonth. His last visit to the Caledonia Cluster until 2937, so don't miss your chance! Hurry! A life of wonder and riches can be yours!*

BROADSIDES like that, distributed wholesale in half a thousand languages, always bring them running. And the Corrigan Institute really packs in the crowds back on Earth. Why not? It's the best of its kind, the only really decent place where Earthmen can get a gander at the other species of the universe.

The office buzzer sounded. Auchinleck said unctuously, "The first applicant is ready to see you, sir."

"Send him, her or it in."

The door opened and a timid-looking life-form advanced toward me on nervous little legs. He was a globular creature about the size of a big basketball, yellowish-green, with two spindly double-kneed legs and five double-elbowed arms, the latter spaced regularly around his body. There was a lidless eye at the top of his head and five lidded ones, one above each arm. Plus a big, gaping, toothless mouth.

His voice was a surprisingly resounding basso. "You are Mr. Corrigan?"

"That's right." I reached for a data blank. "Before we begin, I'll need certain information about—"

"I am a being of Regulus II," came the grave, booming reply, even before I had picked up the blank. "I need no special care and I am not a fugitive from the law of any world."

"Your name?"

"Lawrence R. Fitzgerald."

I throttled my exclamation of surprise, concealing it behind a quick cough. "Let me have that again, please?"

"Certainly. My name is Lawrence R. Fitzgerald. The 'R' stands for Raymond."

"Of course, that's not the name you were born with."

The being closed his eyes and toddled around in a 360-degree rotation, remaining in place. On his world, that gesture is the equivalent of an apologetic smile. "My Regulan name no longer matters. I am now and shall evermore be



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Lawrence R. Fitzgerald. I am a Terraphile, you see."

THE little Regulan was as good as hired. Only the formalities remained. "You understand our terms, Mr. Fitzgerald?"

"I'll be placed on exhibition at your Institute on Earth. You'll pay for my services, transportation and expenses. I'll be required to remain on exhibit no more than one-third of each Terran sidereal day."

"And the pay will be — ah — $50 Galactic a week, plus expenses and transportation."

The spherical creature clapped his hands in joy, three hands clapping on one side, two on the other. "Wonderful! I will see Earth at last! I accept the terms!"

I buzzed for Ludlow and gave him the fast signal that meant we were signing this alien up at half the usual pay, and Ludlow took him into the other office to sign him up.

I grinned, pleased with myself. We needed a green Regulan in our show; the last one had quit four years ago. But just because we needed him didn't mean we had to be extravagant in hiring him. A Terraphile alien who goes to the extent of rechristening himself with a Terran monicker would work for nothing, or even pay us, just so long as we let him get to Earth. My conscience won't let me really *exploit* a being, but I don't believe in throwing money away, either.

The next applicant was a beefy ursinoid from Aldebaran IX. Our outfit has all the ursinoids it needs or is likely to need in the next few decades, and so I got rid of him in a couple of minutes. He was followed by a roly-poly blue-skinned humanoid from Donovan's Planet, four feet high and five hundred pounds heavy. We already had a couple of his species in the show, but they made good crowd-pleasers, being so plump and cheerful. I passed him along to Auchinleck to sign at anything short of top rate.

Next came a bedraggled Sirian spider who was more interested in a handout than a job. If there's any species we have a real oversupply of, it's those silver-colored spiders, but this seedy specimen gave it a try anyway. He got the gate in half a minute, and he didn't even get the handout he was angling for. I don't approve of begging.

The flora of applicants was steady. Ghryne is in the heart of the Caledonia Cluster, where the interstellar crossroads meet. We had figured to pick up plenty of new exhibits here and we were right.

IT was the isolationism of the late 29th century that turned me into the successful proprietor of



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Corrigan's Institute, after some years as an impoverished carnival man in the Betelgeuse system. Back in 2903, the World Congress declared Terra off-bounds for non-terrestrial beings, as an offshoot of the Terra for Terrans movement.

Before then, anyone could visit Earth. After the gate clanged down, a non-terrestrial could only get onto Sol III as a specimen in a scientific collection — in short, as an exhibit in a zoo.

That's what the Corrigan Institute of Morphological Science really is, of course. A zoo. But we don't go out and hunt for our specimens; we advertise and they come flocking to us. Every alien wants to see Earth once in his lifetime, and there's only one way he can do it.

We don't keep too big an inventory. At last count, we had 690 specimens before this trip, representing 298 different intelligent life-forms. My goal is at least one member of at least 500 different races. When I reach that, I'll sit back and let the competition catch up — if it can.

After an hour of steady work that morning, we had signed eleven new specimens. At the same time, we had turned away a dozen ursinoids, fifty of the reptilian natives of Ghryne, seven Sirian spiders, and no less than nineteen chlorine-breathing Procyonites wearing gas masks.

It was also my sad duty to nix a Vegan who was negotiating through a Ghrynian agent. A Vegan would be a top-flight attraction, being some 400 feet long and appropriately fearsome to the eye, but I didn't see how we could take one on. They're gentle and likable beings, but their upkeep runs into literally tons of fresh meat a day, and not just any old kind of meat either. So we had to do without the Vegan.

"One more specimen before lunch," I told Stebbins, "to make it an even dozen."

He looked at me queerly and nodded. A being entered. I took a long close look at the life-form when it came in, and after that I took another one. I wondered what kind of stunt was being pulled. So far as I could tell, the being was quite plainly nothing but an Earthman.

He sat down facing me without being asked and crossed his legs. He was tall and extremely thin, with pale blue eyes and dirty-blond hair, and though he was clean and reasonably well dressed, he had a shabby look about him. He said, in level Terran accents, "I'm looking for a job with your outfit, Corrigan."

"There's been a mistake. We're interested in non-terrestrials only."

"I'm a non-terrestrial. My name is Ildwar Gorb, of the planet Wazzenazz XIII."



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I DON'T mind conning the public from time to time, but I draw the line at getting bilked myself. "Look, friend, I'm busy, and I'm not known for my sense of humor. Or my generosity."

"I'm not panhandling. I'm looking for a job."

"Then try elsewhere. Suppose you stop wasting my time, bud. You're as Earthborn as I am."

"I've never been within a dozen parsecs of Earth," he said smoothly. "I happen to be a representative of the only Earthlike race that exists anywhere in the Galaxy but on Earth itself. Wazzenazz XIII is a small and little-known planet in the Crab Nebula. Through an evolutionary fluke, my race is identical with yours. Now, don't you want me in your circus?"

"No. And it's not a circus. It's —"

"A scientific institute. I stand corrected."

There was something glib and appealing about this preposterous phony. I guess I recognized a kindred spirit or I would have tossed him out on his ear without another word. Instead I played along. "If you're from such a distant place, how come you speak English so well?"

"I'm not speaking. I'm a telepath — not the kind that reads minds, just the kind that projects. I communicate in symbols that you translate back to colloquial speech."

"Very clever, Mr. Gorb." I grinned at him and shook my head. "You spin a good yarn — but for my money, you're really Sam Jones or Phil Smith from Earth, stranded here and out of cash. You want a free trip back to Earth. No deal. The demand for beings from Wazzenazz XIII is pretty low these days. Zero, in fact. Good-by, Mr. Gorb."

He pointed a finger squarely at me and said, "You're making a big mistake. I'm just what your outfit needs. A representative of a hitherto utterly unknown race identical to humanity in every respect! Look here, examine my teeth. Absolutely like human teeth! And — "

I pulled away from his yawning mouth. "Good-by, Mr. Gorb," I repeated.

"All I ask is a contract, Corrigan. It isn't much. I'll be a big attraction. I'll — "

*"Good-by, Mr. Gorb!"*

He glowered at me reproachfully for a moment, stood up and sauntered to the door. "I thought you were a man of acumen, Corrigan. Well, think it over. Maybe you'll regret your hastiness. I'll be back to give you another chance."

He slammed the door and I let my grim expression relax into a smile. This was the best con switch yet — an Earthman posing as an alien to get a job!

But I wasn't buying it, even if



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I could appreciate his cleverness intellectually. There's no such place as Wazzenazz XIII and there's only one human race in the Galaxy — on Earth. I was going to need some real good reason before I gave a down-and-out grifter a free ticket home.

I didn't know it then, but before the day was out, I would have that reason. And, with it, plenty of trouble on my hands.

THE first harbinger of woe turned up after lunch in the person of a Kallerian. The Kallerian was the sixth applicant that afternoon. I had turned away three more ursinoids, hired a vegetable from Miazan, and said no to a scaly pseudo-armadillo from one of the Delta Worlds. Hardly had the 'dillo scuttled dejectedly out of my office when the Kallerian came striding in, not even waiting for Stebbins to admit him officially.

He was big even for his kind — in the neighborhood of nine feet high, and getting on toward a ton. He planted himself firmly on his three stocky feet, extended his massive arms in a Kallerian greeting-gesture, and growled, "I am Vallo Heraal, Freeman of Kaller IV. You will sign me immediately to a contract."

"Sit down, Freeman Heraal. I like to make my own decisions, thanks."

"You will grant me a contract!"

"Will you please sit down?"

He said sulkily, "I will remain standing."

"As you prefer." My desk has a few concealed features which are sometimes useful in dealing with belligerent or disappointed lifeforms. My fingers roamed to the meshgun trigger, just in case of trouble.

The Kallerian stood motionless before me. They're hairy creatures, and this one had a coarse, thick mat of blue fur completely covering his body. Two fierce eyes glimmered out through the otherwise dense blanket of fur. He was wearing the kilt, girdle and ceremonial blaster of his warlike race.

I said, "You'll have to understand, Freeman Heraal, that it's not our policy to maintain more than a few members of each species at our Institute. And we're not currently in need of any Kallerian males, because — "

"You will hire me or trouble I will make!"

I opened our inventory chart. I showed him that we were already carrying four Kallerians, and that was more than plenty.

The beady little eyes flashed like beacons in hte fur. "Yes, you have four representatives — of the Clan Verdrokh! None of the Clan Gursdrinn! For three years, I have waited for a chance to avenge this insult to the noble Clan Gursdrinn!"



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At the key-word *avenge,* I readied myself to ensnarl the Kallerian in a spume of tanglemesh the instant he went for his blaster, but he didn't move. He bellowed, "I have vowed a vow, Earthman. Take me to Earth, enroll a Gursdrinn, or the consequences will be terrible!"

I'M a man of principles, like all straightforward double-dealers, and one of the most important of those principles is that I never let myself be bullied by anyone. "I deeply regret having unintentionally insulted your clan, Freeman Heraal. Will you accept my apologies?"

He glared at me in silence.

I went on, "Please be assured that I'll undo the insult at the earliest possible opportunity. It's not feasible for us to hire another Kallerian now, but I'll give preference to the Clan Gursdrinn as soon as a vacancy — "

"No. You will hire me now."

"It can't be done, Freeman Heraal. We have a budget, and we stick to it."

"You will rue! I will take drastic measures!"

"Threats will get you nowhere, Freeman Heraal. I give you my word I'll get in touch with you as soon as our organization has room for another Kallerian. And now, please, there are many applicants waiting — "

You'd think it would be sort of humiliating to become a specimen in a zoo, but most of these races take it as an honor. And there's always the chance that, by picking a given member of a race, we're insulting all the others.

I nudged the trouble-button on the side of my desk and Auchinleck and Ludlow appeared simultaneously from the two doors at right and left. They surrounded the towering Kallerian and sweet-talkingly led him away. He wasn't minded to quarrel physically, or he could have knocked them both into the next city with a backhand swipe of his shaggy paw, but he kept up a growling flow of invective and threats until he was out in the hall.

I mopped sweat from my forehead and began to buzz Stebbins for the next applicant. But before my finger touched the button, the door popped open and a small being came scooting in, followed by an angry Stebbins.

"Come here, you!"

"Stebbins?" I said gently.

"I'm sorry, Mr. Corrigan. I lost sight of this one for a moment, and he came running in — "

"Please, please," squeaked the little alien pitifully. "I must see you, honored sir!"

"It isn't his turn in line," Stebbins protested. "There are at least fifty ahead of him."

"All right," I said tiredly. "As



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long as he's in here already, I might as well see him. Be more careful next time, Stebbins."

Stebbins nodded dolefully and backed out.

THE alien was a pathetic sight: a Stortulian, a squirrely-looking creature about three feet high. His fur, which should have been a lustrous black, was a dull gray, and his eyes were wet and sad. His tail drooped. His voice was little more than a faint whimper, even at full volume.

"Begging your most honored pardon most humbly, important sir. I am a being of Stortul XII, having sold my last few possessions to travel to Ghryne for the miserable purpose of obtaining an interview with yourself."

I said, "I'd better tell you right at the outset that we're already carrying our full complement of Stortulians. We have both a male and a female now and — "

"This is known to me. The female — is her name perchance Tiress?"

I glanced down at the inventory chart until I found the Stortulian entry. "Yes, that's her name."

The little being immediately emitted a soul-shaking gasp. "It is she! It is she!"

"I'm afraid we don't have room for any more — "

"You are not in full understanding of my plight. The female Tiress, she is — was — my own Firesent spouse, my comfort and my warmth, my life and my love."

"Funny," I said. "When we signed her three years ago, she said she was single. It's right here on the chart."

"She lied! She left my burrow because she longed to see the splendors of Earth. And I am alone, bound by our sacred customs never to remarry, languishing in sadness and pining for her return. You *must* take me to Earth!"

"But — "

"I must see her — her and this disgrace-bringing lover of hers. I must reason with her. Earthman, can't you see I must appeal to her inner flame? *I must bring her back!*"

My face was expressionless. "You don't really intend to join our organization at all — you just want free passage to Earth?"

"Yes, yes!" wailed the Stortulian. "Find some other member of my race, if you must! Let me have my wife again, Earthman! Is your heart a dead lump of stone?"

IT isn't, but another of my principles is to refuse to be swayed by sentiment. I felt sorry for this being's domestic troubles, but I wasn't going to break up a good act just to make an alien squirrel happy — not to mention footing the transportation.



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I said, "I don't see how we can manage it. The laws are very strict on the subject of bringing alien life to Earth. It has to be for scientific purposes only. And if I know in advance that your purpose in coming isn't scientific, I can't in all conscience *lie* for you, can I?"

"Well — "

"Of course not." I took advantage of his pathetic upset to steam right along. "Now if you had come in here and simply asked me to sign you up, I might conceivably have done it. But no — you had to go unburden your heart to me."

"I thought the truth would move you."

"It did. But in effect you're now asking me to conspire in a fraudulent criminal act. Friend, I can't do it. My reputation means too much to me," I said piously.

"Then you will refuse me?"

"My heart melts to nothingness for you. But I can't take you to Earth."

"Perhaps you will send my wife to me here?"

There's a clause in every contract that allows me to jettison an unwanted specimen. All I have to do is declare it no longer of scientific interest, and the World Government will deport the undesirable alien back to its home world. But I wouldn't pull a low trick like that on our female Stortulian.

I said, "I'll ask her about coming home. But I won't ship her back against her will. And maybe she's happier where she is."

The Stortulian seemed to shrivel. His eyelids closed halfway to mask his tears. He turned and shambled slowly to the door, walking like a living dishrag. In a bleak voice, he said, "There is no hope then. All is lost. I will never see my soulmate again. Good day, Earthman."

He spoke in a drab monotone that almost, but not quite, had me weeping. I watched him shuffle out. I do have *some* conscience, and I had the uneasy feeling I had just been talking to a being who was about to commit suicide on my account.

ABOUT fifty more applicants were processed without a hitch. Then life started to get complicated again.

Nine of the fifty were okay. The rest were unacceptable for one reason or another, and they took the bad news quietly enough. The haul for the day so far was close to two dozen new life-forms under contract.

I had just about begun to forget about the incidents of the Kallerian's outraged pride and the Stortulian's flighty wife when the door opened and the Earthman who called himself Ildwar Gorb of Wazzenazz XIII stepped in.



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"How did *you* get in here?" I demanded.

"Your man happened to be looking the wrong way," he said cheerily. "Change your mind about me yet?"

"Get out before I have you thrown out."

Gorb shrugged. "I figured you hadn't changed your mind, so I've changed my pitch a bit. If you won't believe I'm from Wazzenazz XIII, suppose I tell you that I *am* Earthborn, and that I'm looking for a job on your staff."

"I don't care *what* your story is! Get out or — "

" — you'll have me thrown out. Okay, okay. Just give me half a second. Corrigan, you're no fool, and neither am I — but that fellow of yours outside *is*. He doesn't know how to handle alien beings. How many times today has a life-form come in here unexpectedly?"

I scowled at him. "Too damn many."

"You see? He's incompetent. Suppose you fire him, take me on instead. I've been living in the outworlds half my life; I know all there is to know about alien life-forms. You can use me, Corrigan."

I took a deep breath and glanced all around the paneled ceiling of the office before I spoke. "Listen, Gorb, or whatever your name is, I've had a hard day. There's been a Kallerian in here who just about threatened murder, and there's been a Stortulian in here who's about to commit suicide because of me. I have a conscience and it's troubling me. But get this: I just want to finish off my recruiting, pack up and go home to Earth. I don't want you hanging around here bothering me. I'm not looking to hire new staff members, and if you switch back to claiming you're an unknown life-form from Wazzenazz XIII, the answer is that I'm not looking for any of *those* either. Now will you scram or — "

The office door crashed open at that point and Heraal, the Kallerian, came thundering in. He was dressed from head to toe in glittering metalfoil, and instead of his ceremonial blaster, he was wielding a sword the length of a human being. Stebbins and Auchinleck came dragging helplessly along in his wake, hanging desperately to his belt.

"Sorry, Chief," Stebbins gasped. "I tried to keep him out, but — "

Heraal, who had planted himself in front of my desk, drowned him out with a roar. "Earthman, you have mortally insulted the Clan Gursdrinn!"

SITTING with my hands poised near the meshgun trigger, I was ready to let him have it at the first sight of actual violence.

Heraal boomed, "You are responsible for what is to happen now. I have notified the authori-



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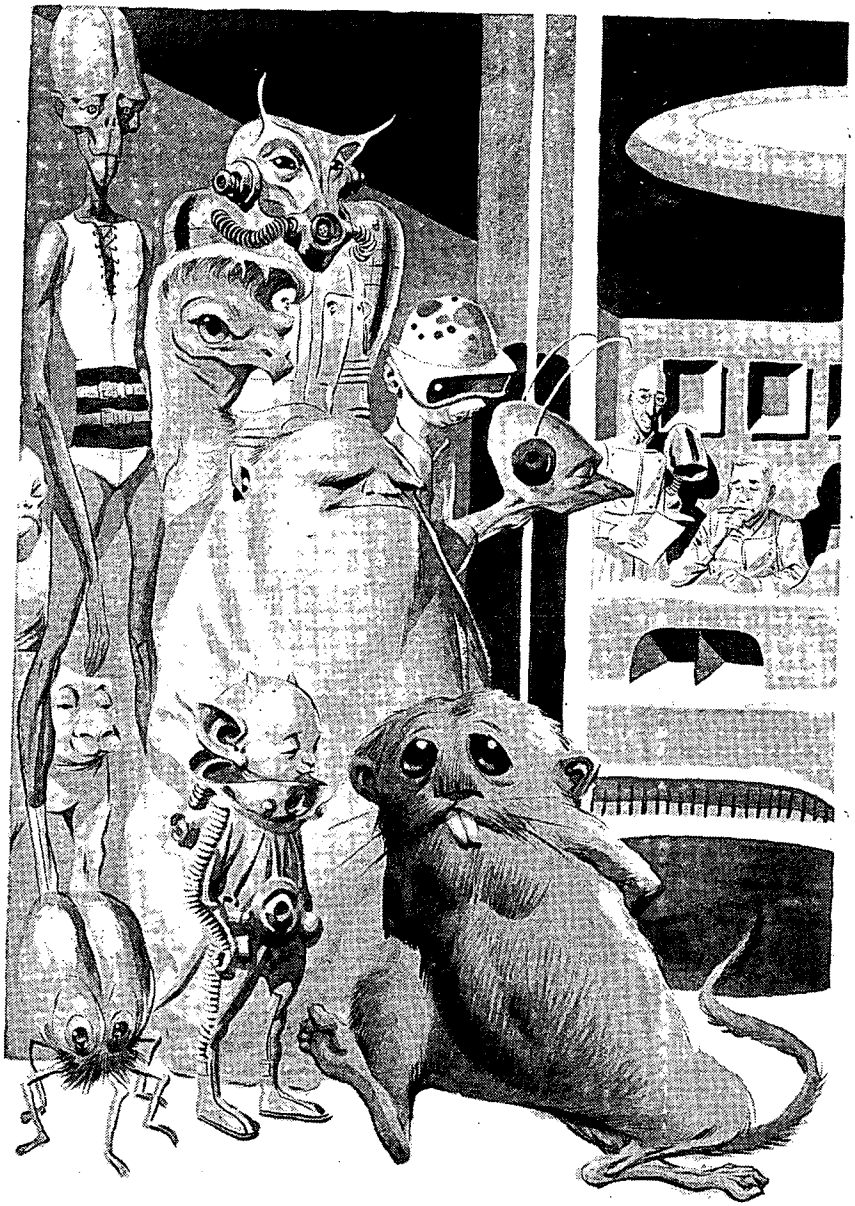



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ties and you prosecuted will be for causing the death of a life-form! Suffer, Earthborn ape! Suffer!"

"Watch it, Chief," Stebbins yelled. "He's going to — "

An instant before my numb fingers could tighten on the meshgun trigger, Heraal swung that huge sword through the air and plunged it savagely through his body. He toppled forward onto the carpet with the sword projecting a couple of feet out of his back. A few driblets of bluish-purple blood spread from beneath him.

Before I could react to the big life-form's hara-kiri, the office door flew open again and three sleek reptilian beings entered, garbed in the green sashes of the local police force. Their golden eyes goggled down at the figure on the floor, then came to rest on me.

"You are J. F. Corrigan?" the leader asked.

"Y-yes."

"We have received word of a complaint against you. Said complaint being — "

" — that your unethical actions have directly contributed to the untimely death of an intelligent life-form," filled in the second of the Ghrynian policemen.

"The evidence lies before us," intoned the leader, "in the cadaver of the unfortunate Kallerian who filed the complaint with us several minutes ago."

"And therefore," said the third lizard, "it is our duty to arrest you for this crime and declare you subject to a fine of no less than $100,000 Galactic or two years in prison."

"Hold on!" I stormed. "You mean that any being from anywhere in the Universe can come in here and gut himself on my carpet, and *I'm* responsible?"

"This is the law. Do you deny that your stubborn refusal to yield to this late life-form's request lies at the root of his sad demise?"

"Well, no, but — "

"Failure to deny is admission of guilt. You are guilty, Earthman."

CLOSING my eyes wearily, I tried to wish the whole babbling lot of them away. If I had to, I could pony up the hundred-grand fine, but it was going to put an awful dent in this year's take. And I shuddered when I remembered that any minute that scrawny little Stortulian was likely to come bursting in here to kill himself too. Was it a fine of $100,000 per suicide? At that rate, I could be out of business by nightfall.

I was spared further such morbid thoughts by yet another unannounced arrival.

The small figure of the Stortulian trudged through the open doorway and stationed itself limply near the threshold. The three Ghrynian policemen and my three



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assistants forgot the dead Kallerian for a moment and turned to eye the newcomer.

I had visions of unending troubles with the law here on Ghryne. I resolved never to come here on a recruiting trip again — or, if I *did* come, to figure out some more effective way of screening myself against crackpots.

In heart-rending tones, the Stortulian declared, "Life is no longer worth living. My last hope is gone. There is only one thing left for me to do."

I was quivering at the thought of another hundred thousand smackers going down the drain. "Stop him, somebody! He's going to kill himself! He's — "

Then somebody sprinted toward me, hit me amidships, and knocked me flying out from behind my desk before I had a chance to fire the meshgun. My head walloped the floor, and for five or six seconds, I guess I wasn't fully aware of what was going on.

Gradually the scene took shape around me. There was a monstrous hole in the wall behind my desk; a smoking blaster lay on the floor, and I saw the three Ghrynian policemen sitting on the raving Stortulian. The man who called himself Ildwar Gorb was getting to his feet and dusting himself off.

He helped me up. "Sorry to have had to tackle you, Corrigan. But that Stortulian wasn't here to commit suicide, you see. He was out to get you."

I weaved dizzily toward my desk and dropped into my chair. A flying fragment of wall had deflated my pneumatic cushion. The smell of ashed plaster was everywhere. The police were effectively cocooning the struggling little alien in an unbreakable tanglemesh.

"Evidently you don't know as much as you think you do about Stortulian psychology, Corrigan," Gorb said lightly. "Suicide is completely abhorrent to them. When they're troubled, they kill the person who caused their trouble. In this case, you."

I BEGAN to chuckle—more of a tension-relieving snicker than a full-bodied laugh.

"Funny," I said.

"What is?" asked the self-styled Wazzenazzian.

"These aliens. Big blustery Heraal came in with murder in his eye and killed *himself*, and the pint-sized Stortulian who looked so meek and pathetic damn near blew my head off." I shuddered. "Thanks for the tackle job."

"Don't mention it," Gorb said.

I glared at the Ghrynian police. "Well? What are you waiting for? Take that murderous little beast out of here! Or isn't murder against the local laws?"

"The Stortulian will be duly



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punished," replied the leader of the Ghrynian cops calmly. "But there is the matter of the dead Kallerian and the fine of — "

" — one hundred thousand dollars. I know." I groaned and turned to Stebbins. "Get the Terran Consulate on the phone, Stebbins. Have them send down a legal adviser. Find out if there's any way we can get out of this mess with our skins intact."

"Right, Chief." Stebbins moved toward the visiphone.

Gorb stepped forward and put a hand on his chest.

"Hold it," the Wazzenazzian said crisply. "The Consulate can't help you. I can."

"You?" I said.

"I can get you out of this cheap."

"*How* cheap?"

Gorb grinned rakishly. "Five thousand in cash plus a contract as a specimen with your outfit. In advance, of course. That's a heck of a lot better than forking over a hundred grand, isn't it?"

I eyed Gorb uncertainly. The Terran Consulate people probably wouldn't be much help; they tried to keep out of local squabbles unless they were really serious, and I knew from past experiences that no officials ever worried much about the state of my pocketbook. On the other hand, giving this slyster a contract might be a risky proposition.

"Tell you what," I said finally. "You've got yourself a deal — but on a contingency basis. Get me out of this and you'll have five grand and the contract. Otherwise, nothing."

Gorb shrugged. "What have I to lose?"

BEFORE the police could interfere, Gorb trotted over to the hulking corpse of the Kallerian and fetched it a mighty kick.

"Wake up, you faker! Stop playing possum and stand up! You aren't fooling anyone!"

The Ghrynians got off the huddled little assassin and tried to stop Gorb. "Your pardon, but the dead require your respect," began one of the lizards mildly.

Gorb whirled angrily. "Maybe the dead do — but this character isn't dead!"

He knelt and said loudly in the Kallerian's dishlike ear, "You might as well quit it, Heraal. Listen to this, you shamming mountain of meat — *your mother knits doilies for the Clan Verdrokh!*"

The supposedly dead Kallerian emitted a twenty-cycle rumble that shook the floor, and clambered to his feet, pulling the sword out of his body and waving it in the air. Gorb leaped back nimbly, snatched up the Stortulian's fallen blaster, and trained it neatly on the big alien's throat before he could do any damage. The Kaller-



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ian grumbled and lowered his sword.

I felt groggy. I thought I knew plenty about non-terrestrial lifeforms, but I was learning a few things today. "I don't understand. How – "

The police were blue with chagrin. "A thousand pardons, Earthman. There seems to have been some error."

"There seems to have been a cute little con game," Gorb remarked quietly.

I recovered my balance. "Try to milk me of a hundred grand when there's been no crime?" I snapped. "I'll say there's been an error! If I weren't a forgiving man, I'd clap the bunch of you in jail for attempting to defraud an Earthman! Get out of here! And take that would-be murderer with you!"

They got, and they got fast, burbling apologies as they went. They had tried to fox an Earthman, and that's a dangerous sport. They dragged the cocooned form of the Stortulian with them. The air seemed to clear, and peace was restored. I signaled to Auchinleck and he slammed the door.

"All right." I looked at Gorb and jerked a thumb at the Kallerian. "That's a nice trick. How does it work?"

GORB smiled pleasantly. He was enjoying this, I could see. "Kallerians of the Clan Gursdrinn specialize in a kind of mental discipline, Corrigan. It isn't too widely known in this area of the Galaxy, but men of that clan have unusual mental control over their bodies. They can cut off circulation and nervous-system response in large chunks of their bodies for hours at a stretch – an absolutely perfect imitation of death. And, of course, when Heraal put the sword through himself, it was a simple matter to avoid hitting any vital organs en route."

The Kallerian, still at gunpoint, hung his head in shame. I turned on him. "So – try to swindle me, eh? You cooked this whole fake suicide up in collusion with those cops."

He looked quite a sight, with that gaping slash running clear through his body. But the wound had begun to heal already. "I regret the incident, Earthman. I am mortified. Be good enough to destroy this unworthy person."

It was a tempting idea, but a notion was forming in my showman's mind. "No, I won't destroy you. Tell me – how often can you do that trick?"

"The tissues will regenerate in a few hours."

"Would you mind having to kill yourself every day, Heraal? And twice on Sundays?"

Heraal looked doubtful. "Well, for the honor of my Clan, perhaps – "



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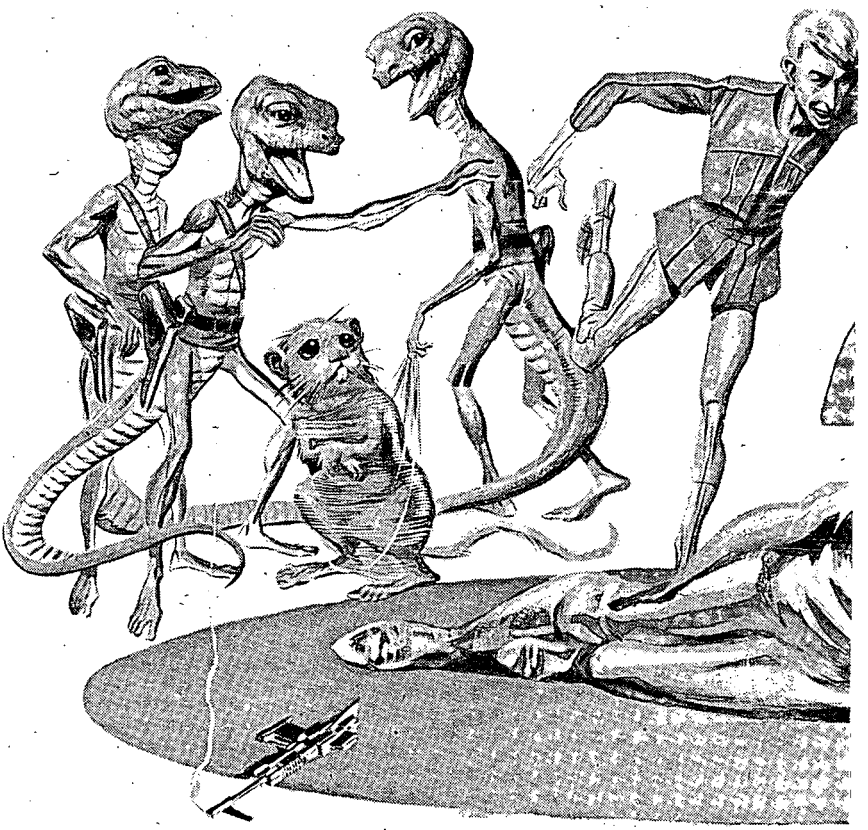
Stebbins said, "Boss, you mean — "

"Shut up. Heraal, you're hired — $75 a week plus expenses. Stebbins, get me a contract form — and type in a clause requiring Heraal to perform his suicide stunt at least five but no more than eight times a week."

I felt a satisfied glow. There's nothing more pleasing than to turn a swindle into a sure-fire crowd-puller.

"Aren't you forgetting something, Corrigan?" asked Ildwar Gorb in a quietly menacing voice. "We had a little agreement, you know."

"Oh. Yes." I moistened my lips and glanced shiftily around the office. There had been too many witnesses. I couldn't back down. I





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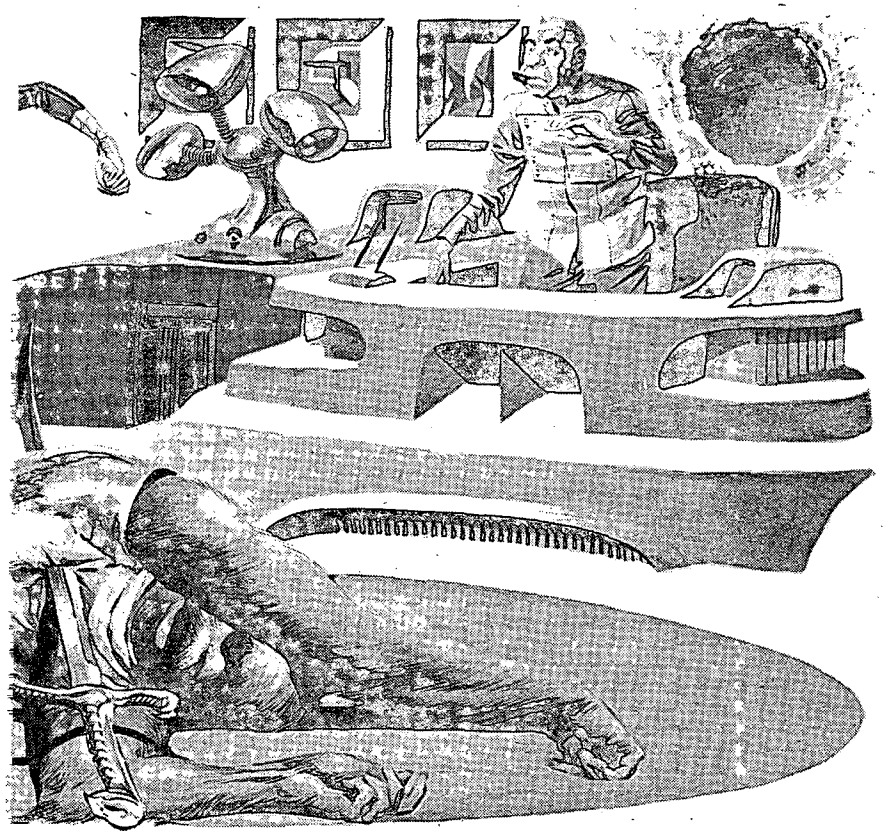
had no choice but to write out a check for five grand and give Gorb a standard alien-specimen contract. Unless . . .

"Just a second," I said. "To enter Earth as an alien exhibit, you need proof of alien origin."

He grinned, pulled out a batch of documents. "Nothing to it. Everything's stamped and in order — and anybody who wants to prove these papers are fraudulent will have to find Wazzenazz XIII first!"

We signed and I filed the contracts away. But only then did it occur to me that the events of the past hour might have been even more complicated than they looked. Suppose, I wondered, Gorb had conspired with Heraal to stage the fake suicide, and rung in the





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cops as well — with contracts for both of them the price of my getting off the hook?

It could very well be. And if it was, it meant I had been taken as neatly as any chump I'd ever conned.

Carefully keeping a poker face, I did a silent burn. Gorb, or whatever his real name was, was going to find himself living up to that contract he'd signed — every damn word and letter of it!

WE left Ghryne later that week, having interviewed some eleven hundred alien life-forms and having hired fifty-two. It brought the register of our zoo — pardon me, the Institute — to a nice pleasant 742 specimens representing 326 intelligent life-forms.

Ildwar Gorb, the Wazzenazzian — who admitted that his real name was Mike Higgins, of St. Louis — turned out to be a tower of strength on the return voyage. It developed that he really *did* know all there was to know about alien life-forms.

When he found out I had turned down the 400-foot-long Vegan because the upkeep would be too big, Gorb-Higgins rushed off to the Vegan's agent and concluded a deal whereby we acquired a fertilized Vegan ovum, weighing hardly more than an ounce. Transporting *that* was a lot cheaper than lugging a full-grown adult Vegan, besides which, he assured me that the infant beast could be adapted to a diet of vegetables without any difficulty.

He made life a lot easier for me during the six-week voyage to Earth in our specially constructed ship. With fifty-two alien life-forms aboard, all sorts of dietary problems arose, not to mention the headaches that popped up over pride of place and the like. The Kallerian simply refused to be quartered anywhere but on the left-hand side of the ship, for example — but that was the side we had reserved for low-gravity creatures, and there was no room for him there.

"We'll be traveling in hyperspace all the way to Earth," Gorb-Higgins assured the stubborn Kallerian. "Our cosmostatic polarity will be reversed, you see."

"Hah?" asked Heraal in confusion.

"The cosmostatic polarity. If you take a bunk on the left-hand side of the ship, you'll be traveling on the right-hand side all the way there!"

"Oh," said the big Kallerian. "I didn't know that. Thank you for explaining."

He gratefully took the stateroom we assigned him.

Higgins really had a way with the creatures, all right. He made us look like fumbling amateurs, and I had been operating in this



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business more than fifteen years.

Somehow Higgins managed to be on the spot whenever trouble broke out. A highly strung Norvennith started a feud with a pair of Vanoinans over an alleged moral impropriety; Norvennithi can be *very* stuffy sometimes. But Gorb convinced the outraged being that what the Vanoinans were doing in the washroom was perfectly proper. Well, it was, but I'd never have thought of using that particular analogy.

I could list half a dozen other incidents in which Gorb-Higgins' special knowledge of outworld beings saved us from annoying hassles on that trip back. It was the first time I had ever had another man with brains in the organization and I was getting worried.

When I first set up the Institute back in the early 2920s, it was with my own capital, scraped together while running a comparative biology show on Betelgeuse IX. I saw to it that I was the sole owner. And I took care to hire competent but unspectacular men as my staffers — men like Stebbins, Auchinleck and Ludlow.

Only now I had a viper in my bosom, in the person of this Ildwar Gorb-Mike Higgins. He could think for himself. He knew a good racket when he saw one. We were birds of a feather, Higgins and I. I doubted if there was room for both of us in this outfit.

I SENT for him just before we were about to make Earthfall, offered him a few slugs of brandy before I got to the point. "Mike, I've watched the way you handled the exhibits on the way back here."

"The *other* exhibits," he pointed out. "I'm one of them, not a staff man."

"Your Wazzenazzian status is just a fiction cooked up to get you past the immigration authorities, Mike. But I've got a proposition for you."

"Propose away."

"I'm getting a little too old for this starcombing routine," I said. "Up to now, I've been doing my own recruiting, but only because I couldn't trust anyone else to do the job. I think you could handle it, though." I stubbed out my cigarette and lit another. "Tell you what, Mike — I'll rip up your contract as an exhibit, and I'll give you another one as a staffman, paying twice as much. Your job will be to roam the planets finding new material for us. How about it?"

I had the new contract all drawn up. I pushed it toward him, but he put his hand down over mine and smiled amiably as he said, "No go."

"No? Not even for twice the pay?"

"I've done my own share of roaming," he said. "Don't offer me more money. I just want to settle



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down on Earth, Jim. I don't care about the cash. Honest."

It was very touching, and also very phony, but there was nothing I could do. I coudn't get rid of him that way. I had to bring him to Earth.

The immigration officials argued about his papers, but he'd had the things so cleverly faked that there was no way of proving he wasn't from Wazzenazz XIII. We set him up in a key spot of the building.

The Kallerian, Heraal, is one of our top attractions now. Every day at two in the afternoon, he commits ritual suicide, and soon afterward rises from death to the accompaniment of a trumpet fanfare. The four other Kallerians we had before are wildly jealous of the crowds he draws, but they're just not trained to do his act.

But the unquestioned number one attraction here is confidence man Mike Higgins. He's billed as the only absolutely human lifeform from an extraterrestrial planet, and though we've had our share of debunking, it has only increased business.

Funny that the biggest draw at a zoo like ours should be a homegrown Earthman, but that's show business.

A COUPLE of weeks after we got back, Mike added a new wrinkle to the act. He turned up with a blonde showgirl named Marie, and now we have a Woman from Wazzenazz too. It's more fun for Mike that way. And downright clever.

He's too clever, in fact. Like I said, I appreciate a good confidence man, the way some people appreciate fine wine. But I wish I had left Ildwar Gorb back on Ghryne, instead of signing him up with us.

Yesterday he stopped by at my office after we had closed down for the day. He was wearing that pleasant smile he always wears when he's up to something.

He accepted a drink, as usual, and then he said, "Jim, I was talking to Lawrence R. Fitzgerald yesterday."

"The little Regulan? The green basketball?"

"That's the one. He tells me he's only getting $50 a week. And a lot of the other boys here are drawing pretty low pay too."

My stomach gave a warning twinge. "Mike, if you're looking for a raise, I've told you time and again you're worth it to me. How about twenty a week?"

He held up one hand. "I'm not angling for a raise for *me*, Jim."

"What then?"

He smiled beatifically. "The boys and I held a little meeting yesterday evening, and we — ah — formed a union, with me as leader. I'd like to discuss the idea of a general wage increase for



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every one of the exhibits here."

"Higgins, you blackmailer, how can I afford — "

"Easy," he said. "You'd hate to lose a few weeks' gross, wouldn't you?"

"You mean you'd call a strike?"

He shrugged. "If you leave me no choice, how else can I protect my members' interests?"

After about half an hour of haggling, he sweated me into an across-the-board increase for the entire mob, with a distinct hint of further raises to come. But he also casually let me know the price he's asking to call off the hounds. He wants a partnership in the Institute; a share in the receipts.

If he gets that, it makes him a member of management, and he'll have to quit as union leader. That way I won't have him to contend with as a negotiator.

But I *will* have him firmly embedded in the organization, and once he gets his foot in the door, he won't be satisfied until he's on top — which means when I'm out.

BUT I'm not licked yet! Not after a full lifetime of conniving and swindling! I've been over and over the angles and there's one thing you can always count on — a trickster will always outsmart himself if you give him the chance. I did it with Higgins. Now he's done it with me.

He'll be back here in half an hour to find out whether he gets his partnership or not. Well, he'll get his answer. I'm going to affirm, as per the escape clause in the standard exhibit contract he signed, that he is no longer of scientific value, and the Feds will pick him up and deport him to his home world.

That leaves him two equally nasty choices.

Those fake documents of his were good enough to get him admitted to Earth as a legitimate alien. How the World Police get him back there is their headache — and his.

If he admits the papers were phony, the only way he'll get out of prison will be when it collapses of old age.

So I'll give him a third choice: He can sign an undated confession, which I will keep in my safe, as guarantee against future finagling.

I don't expect to be around forever, you see, though, with that little secret I picked up on Rimbaud II, it'll be a good long time, not even barring accidents, and I've been wondering whom to leave the Corrigan Institute of Morphological Science to. Higgins will make a fine successor.

Oh, one more thing he will have to sign. It remains the Corrigan Institute as long as the place is in business.

Try to outcon me, will he?

— ROBERT SILVERBERG



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# GALAXY'S 5 Star Shelf

*EARTHLIGHT by Arthur C. Clarke. Ballantine Books, N. Y.,* $2.75

CLARKE'S creative and imaginative thinking transports the reader to Luna via some of the most inspired descriptive writing in or out of science fiction. Tack all this onto a most plausible and subtle plot of agent and counter-agent and the result is a thoroughgoing delight.

The weary theme of conflict between Mother Earth and raw-material-hungry colonies is given a fresh rework and the counter-agent is as believable in his role as your neighbor's in his. A supposed auditor of the lunar observatory, he is baffled in his search among the professional staff for the spy, and for good reason. Also, the war of rebellion is as credible in motivation as that of 1776 was. Worth reading and rereading.

*THE SURVIVORS by Tom Godwin. Gnome Press, N. Y.,* $3.00

IF history teaches us anything, it's (to paraphrase) "Don't sell the human people short." Our race, despite its apparent frailty, has



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managed to survive and thrive, witness the Bindibu and Eskimo, in the most barren and impossible environments.

Godwin developes this theme in a tough novel of the fight for survival and vengeance of a shipload of settlers, set upon and cast away on a desert planet by a race of dastards. As if having to fight the miserably fluctuating climate, the 1.5 gravity and the complete lack of workable materials weren't enough, there are two murderously alien life-forms.

The story chronicles the successive problems of several generations while they laboriously survive. Early in their career, they figuratively burn their bridges by transmitting a weak radioed challenge to their malefactors that they know will result in reprisal when the messages are received two hundred years in the future.

I read this yarn with the same glow of pride in the indestructibility of the human race that I once received from van Vogt's early *The Alien*. But will *we* let us live?

*THE BEST SCIENCE FICTION STORIES AND NOVELS edited by T. E. Dikty. Advent, Chicago,* $3.50

CALLING any anthology in any field "The Best" has always been an arrogant practice, but in science fiction it's plain malpractice — most of the best stories of any year are committed to magazine anthologies and authors' collections, so "The Best," no matter who the anthologist, merely means the best of whatever is left over that the claimant can beat the opposition to. For example, of the fourteen stories, eight are from two magazines — GALAXY has its *Readers,* remember — and, of the fourteen, two might legitimately contend for top honors, four are just good, which isn't enough for a "Best" accolade, four are fair, four fill space.

The two lonely contenders are Eric Frank Russell's "Into Your Tent I'll Creep," a nastily convincing indictment of Man's best friend, and Poul Anderson's "Call Me Joe," a fresh look at an oft-done theme, man-made adaptations to alien environments.

*SPACEWAYS SATELLITE by Charles Eric Maine. Avalon Books, N. Y.,* $2.75

IN writing as in anything else, improvement results from application and hard work. Maine is a prime example of this parental proverb; through sheer output, his standards have risen. Though not the equal of his recent excellent *High Vacuum, Satellite* nevertheless shows to better advantage than his earlier works. Of obvious topical interest, it also employs



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a provocative gimmick, the *Corpus Delicti* legal dodge carried skyhigh.

The story concerns the building of Satellite Rocket One in Nevada, designed to orbit at greater heights than Vanguards or Sputniks. The nominal hero, Conway, is Security Officer and his chief concern is to defuse an explosive marital tangle. Unfortunately, Maine is somewhat uninformed concerning governmental supervision of vital projects, and here, as in other works of his, situations develop by default and key characters possess unbelievable naiveté. But the story makes no pretensions of being in a class with the late Cyril Kornbluth's unforgettable *Takeoff* or Clarke's *Prelude to Space* and affords a pleasant interlude.

*MAN OF EARTH by Algis Budrys. Ballantine Books, N. Y., $2.00*

BUDRYS has cut a complex tale from simple cloth. What will a man do with his life if given, not only a fresh start, but a spanking new identity and physiognomy? The consensus of authors who have previously tried this tack is: not much. Budrys disagrees. He feels that certain characteristics can be acquired with a different physique.

His protagonist, a soft, cowardly market manipulator, is about to lose his illicitly acquired commercial empire to the SEC. To avoid personal punishment, he permits the misleadingly named *Doncaster Industrial Linens* to exchange his plump softness and hard cash for tall musculature and limp pocket. Additionally, *Doncaster* dumps him on Pluto with no way to buy his return from the bankrupt colony.

However, the locals are organizing a crack, brutally disciplined army and his lack of other qualifications and his newfound brawn make him a natural GI. This is where you can agree or otherwise with Budrys. Is it reasonable for Sibley to harden outside from mind of steal to man of steel?

One of Budrys' other main characters is a person only in the legal sense with surprising motives.

*H. P. LOVECRAFT MEMORIAL SYMPOSIUM, edited by Steve Eisner. University of Detroit*

UNLIKE other recipients of presents, I always examine the dentures of gratis equines. Result here: I recommend that you send for your free copy to U. of D., 4001 McNichols Rd., Detroit. 1st come, 1st srvd.

Since HPL died twenty-one years ago, younger readers will have had little chance to become acquainted with the life of this



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fantastic person who lived as strangely as he wrote. Almost legendary, he has been called many things, including the Sage of Providence and the modern successor to E. A. Poe. To many his works are the utmost pinnacle of supernatural horror; to others, overpurpled, adjectival drivel.

Of certain interest, regardless of your opinion, are the savage article by the late Dr. David H. Keller dissecting the psychological ticking of the Lovecraft mental mechanism, and the equally savage rebuttal by Dr. Kenneth Sterling.

Fritz Leiber and August Derleth contribute, and a famous short of Lovecraft's "The Music of Erich Zann," is a surprise bonus.

*TEN MILES HIGH, TWO MILES DEEP, by Alan Honour. Whittlesey House, N. Y., Toronto,* $3.00

TO my eye, nobody ever looked more the personification of professorship than the Piccard twins: tall and spare, with Roger Price hairdos. Neither did anyone more exemplify the spirit of adventure in science. Their joint and separate balloon ventures in the thirties were imagination clutchers and the development of Auguste's bathyscaphe along the principles of the stratosphere balloons has brought the undersea abyss within Man's range.

Honour's book does considerably more honor to the men than Auguste's own *Earth, Sky and Sea* which almost succeeded in convincing the reader that, shucks, 'twarn't nuthin'.

Recommended as inspirational reading for the budding scientist as proof that adventure still holds a place in science.

*ROCKETS THROUGH SPACE by Lester del Rey. John C. Winston Co., Phila.,* $3.95

IN this beautiful book, del Rey the storyteller sticks strictly to facts. While he is admittedly merely correlating known knowledge, he does so with the added advantage of the professional fictional fictioneer to the added enjoyment of the reader. Even though the text is pre-Sputnik, there is the basic background material necessary for proper understanding of theory, fact and problems.

The author calls himself to task, a decade and a half belatedly, for having gravity affect his characters in a story while the ship is in free fall. A common error then, but something that could never pass a schoolboy nowadays.

James Heugh has contributed strikingly beautiful color plates and line drawings that would do credit to Bonestell himself.

—FLOYD C. GALE



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# NO SUBSTITUTIONS

By JIM HARMON

*If it was happening to him, all right, he could take that . . . but what if he was happening to it?*

PUTTING people painlessly to sleep is really a depressing job. It keeps me awake at night thinking of all those bodies I have sent to the vaults, and it interferes to a marked extent with my digestion. I thought before Councilman Coleman came to see me that there wasn't much that could bother me worse.

Coleman came in the morning before I was really ready to face the day. My nerves were fairly well shot from the kind of work I did as superintendent of Dreamland. I chewed up my pill to calm me down, the one to pep me up, the capsule to strengthen my qualities as a relentless perfectionist. I washed them down with gin and orange juice and sat back, build-

Illustrated by JOHNSON



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ing up my fortitude to do business over the polished deck of my desk.

But instead of the usual morning run of hysterical relatives and masochistic mystics, I had to face one of my superiors from the Committee itself.

Councilman Coleman was an impressive figure in a tailored black tunic. His olive features were set off by bristling black eyes and a mobile mustache. He probably scared most people, but not me. Authority doesn't frighten me any more. I've put to sleep too many megalomaniacs, dictators, and civil servants.

"Warden Walker, I've been following your career with considerable interest," Coleman said.

"My career hasn't been very long, sir," I said modestly. I didn't mention that *nobody* could last that long in my job. At least, none had yet.

"I've followed it from the first. I know every step you've made."

I didn't know whether to be flattered or apprehensive. "That's fine," I said. It didn't sound right.

"Tell me," Coleman said, crossing his legs, "what do you think of Dreamland in principle?"

"Why, it's the logical step forward in penal servitude. Man has been heading toward this since he first started civilizing himself. After all, some criminals *can't* be helped psychiatrically. We can't execute them or turn them free; we have to imprison them."

I waited for Coleman's reaction. He merely nodded.

"Of course, it's barbaric to think of a prison as a place of punishment," I continued. "A prison is a place to keep a criminal away from society for a specific time so he can't harm that society for that time. Punishment, rehabilitation, all of it is secondary to that. The purpose of confinement is confinement."

THE councilman edged forward an inch. "And you really think Dreamland is the most humane confinement possible?"

"Well," I hedged, "it's the most humane we've found yet. I suppose living through a — uh — movie with full sensory participation for year after year can get boring."

"I should think so," Coleman said emphatically. "Warden, don't you sometimes feel the old system where the prisoners had the diversions of riots, solitary confinement, television, and jailbreaks may have made time easier to serve? Do these men ever think they are *actually* living these vicarious adventures?"

That was a question that made all of us in the Dreamland service uneasy. "No, Councilman, they don't. They know they aren't really Alexander of Macedonia, Tarzan, Casanova, or Buffalo Bill.



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They are conscious of all the time that is being spent out of their real lives; they know they have relatives and friends outside the dream. They know, unless—"

Coleman lifted a dark eyebrow above a black iris. "Unless?"

I cleared my throat. "Unless they go mad and really believe the dream they are living. But as you know, sir, the rate of madness among Dreamland inmates is only slightly above the norm for the population as a whole."

"How do prisoners like that adjust to reality?"

Was he deliberately trying to ask tough questions? "They don't. They think they are having some kind of delusion. Many of them become schizoid and pretend to go along with reality while secretly 'knowing' it to be a lie."

Coleman removed a pocket secretary and broke it open. "About these new free-choice models — do you think they genuinely are an improvement over the old fixed-image machines?"

"Yes, sir," I replied. "By letting the prisoner project his own imagination onto the sense tapes and giving him a limited amount of alternatives to a situation, we can observe whether he is conforming to society to a larger extent."

"I'm glad you said that, Walker," Councilman Coleman told me warmly. "As I said, I've been following your career closely, and if you get through the next twenty-four-hour period as you have through the foregoing part of your Dream, you will be awakened at this time tomorrow. Congratulations!"

I sat there and took it.

He was telling *me*, the superintendent of Dreamland, that my own life here was only a Dream such as I fed to my own prisoners. It was unbelievably absurd, a queasy little joke of some kind. But I didn't deny it.

IF it *were* true, if I had forgotten that everything that happened was only a Dream, and if I admitted it, the councilman would know I was mad. *It couldn't be true.* Yet—

Hadn't I thought about it ever since I had been appointed warden and transferred from my personnel job at the plant?

Whenever I had come upon two people talking, and it seemed as if I had come upon those same two people talking the same talk before, hadn't I wondered for an instant if it couldn't be a Dream, not reality at all?

Once I had experienced a Dream for five or ten minutes. I was driving a ground car down a spidery road made into a dismal tunnel by weeping trees, a dank, lavender maze. I had known at the time it was a Dream, but still, as the moments passed, I became



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more intent on the difficult road before me, my blocky hands on the steering wheel, thick fingers typing out the pattern of motion on the drive buttons.

I could remember that. Maybe I couldn't remember being shoved into the prison vault for so many years for such and such a crime.

I didn't really believe this, not then, but I couldn't afford to make a mistake, even if it were only some sort of intemperate test—as I was confident it was, with a sweet, throbbing fury against the man who would employ such a jagged broadsword for prying in his bureaucratic majesty.

"I've always thought," I said, "that it would be a good idea to show a prisoner what the modern penal system was all about by giving him a Dream in which he dreamed about Dreamland itself."

"Yes, indeed," Coleman concurred. Just that and no more.

I leaned intimately across my beautiful oak desk. "I've thought that projecting officials into the Dream and letting them talk with the prisoners might be a more effective form of investigation than mere observation."

"I should say so," Coleman remarked, and got up.

I *had* to get more out of him, some proof, some clue beyond the preposterous announcement he had made.

"I'll see you tomorrow at this time then, Walker." The councilman nodded curtly and turned to leave my office.

I held onto the sides of my desk to keep from diving over and teaching him to change his concept of humor.

The day was starting. If I got through it, giving a good show, I would be released from my Dream, he had said smugly.

But if this was a dream, did I want probation to reality?

HORBIT was a twitchy little man whose business tunic was the same rodent color as his hair. He had a pronounced tic in his left cheek. "I have to get back," he told me with compelling earnestness.

"Mr. Horbit — Eddie —" I said, glancing at his file projected on my desk pad, "I can't put you back into a Dream. You served your full time for your crime. The maximum."

"But I haven't adjusted to society!"

"Eddie, I can shorten sentences, but I can't expand them beyond the limit set by the courts."

A tear of frustration spilled out of his left eye with the next twitch. "But Warden, sir, my psychiatrist said that I was unable to cope with reality. Come on now, Warden, you don't want a guy who can't cope with reality running around loose." He paused, puz-



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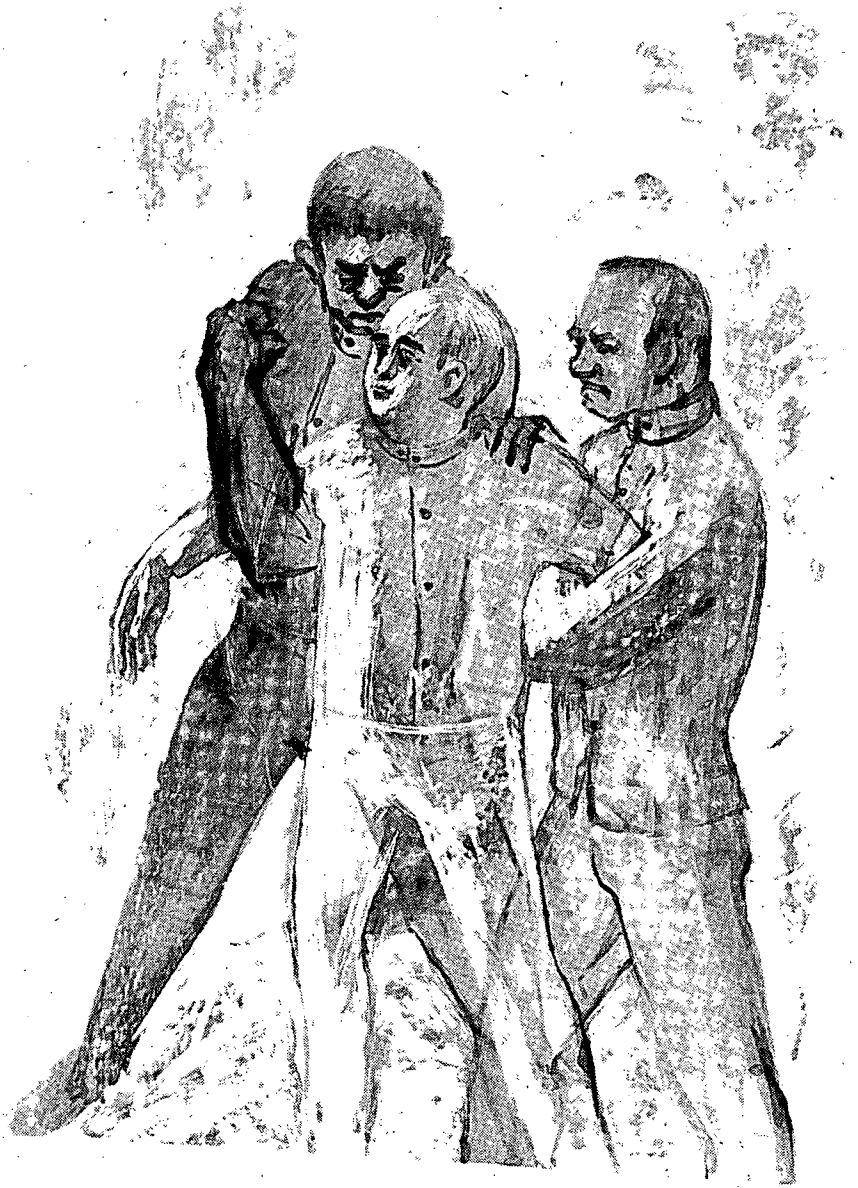



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zled. "Hell, I don't know why I can't express myself like I used to."

He could express himself much better in his Dream. He had been Abraham Lincoln in his Dream, I saw. He had lived the life right up to the night when he was taking in *An American Cousin* at the Ford Theater. Horbit couldn't accept history that he had no more life to live. He only knew that if in his delirium he could gain Dreamland once more, he could get back to the hard realities of dealing with the problems of Reconstruction.

*"Please,"* he begged.

I looked up from the file. "I'm sorry, Eddie."

His eyes narrowed, both of them, on the next twitch. "Warden, I can always go out and commit another anti-social act."

"I'm afraid not, Eddie. The file shows you are capable of only one crime. And you don't have a wife any more, and she doesn't have a lover."

Horbit laughed. "Your files aren't infallible, Warden."

With one gesture, he ripped open his tunic and tore into his own flesh. No, not his own flesh. Pseudo-flesh. He took out the gun that was underneath.

"The beamer is made of X-ray-transparent plastic, Warden, but it works as well as one made of steel and lead."

"Now that you've got it in here," I said in time with the pulse in my throat, "what are you going to do with it?"

"I'm going to make you go down to the vaults and put me back to sleep, Warden."

I nodded. "I suppose you can do that. But what's to prevent me from waking you up as soon as I've taken away your gun?"

"This!" He tossed a sheet of paper onto my desk.

"What's this?" I asked unnecessarily. I could read it.

"A confession that you accepted a bribe to put me back to sleep," Horbit said, his tic beating out a feverish tempo. "As soon as you've signed it, I'll use your phone to have it telefaxed to the Registrar of Private Documents."

I had to admire the thought behind the idea. Horbit was convinced that I was only a figment of his unfocused imagination, but he was playing the game with uncompromising logic, trusting that even madness had hard and tight rules behind it.

There was also something else I admired about the plan.

It could work.

Once he fed that document to the archives, I would be obligated to help him even without the gun. My word would probably be taken that I had been forced to do it at gunpoint, but there would always be doubts, enough to wreck my



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career when it came time for promotion.

Nothing like this had ever happened in my years as warden.

SUDDENLY, Coleman's words hit me in the back of the neck. *If I got through the next twenty-four hours.* This had to be some kind of test.

But a test for what?

Had I been deliberately told that I was living only a Dream to see if my ethics would hold up even when I thought I wasn't dealing with reality?

Or if this *was* only a Dream, was it a test to see if I was morally ready to return to the real, the earnest world?

But if it was a test to see if I was ready for reality, did I want to pass it? My life was nerve-racking and mind-wrecking, but I liked the challenge — it was the only life I knew or could believe in.

What was I going to do?

The only thing I knew was that I couldn't tune in tomorrow and find out.

The time was *now.*

Horbit motioned the gun to my desk set. "Sign that paper."

I reached out and took hold of his wrist. I squeezed.

Horbit's screams brought in the guards.

I picked up the gun from where he had dropped it and handed it to Captain Keller, my head guard, a tough old bird who wore his uniform like armor.

"Trying to force his way back to the sleep tanks," I told Keller.

He nodded. "Happened before. Back when old man Preston lost his grip."

Preston had been my predecessor. He had lost his hold on reality like all the others before him who had served long as warden of Dreamland. A few had quit while they were still ahead and spent the rest of their lives recuperating. Our society didn't produce individuals tough enough to stand the strain of putting their fellow human beings to sleep for long.

One of Keller's men had stabbed Horbit's arm with a hypospray to blanket the pain from his broken wrist, and the man was quieter.

"I couldn't have done it, Warden," Horbit mumbled drowsily. "I couldn't kill anybody. Unless it was like that other time."

"Of course, Eddie," I said.

I had banked on that, hadn't I, when I made my move?

Or did I?

Wasn't it perhaps a matter of knowing that all of it wasn't real and that the safety cutoffs in even a free-choice model of a Dream Machine couldn't let me come to any real harm? I had been suspiciously brave, disarming a dedicated maniac. With only an hour to spare for gym a day, I could barely press 350 pounds. I was



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hardly in shape for personal combat.

On the other hand, maybe I actually wanted something to go wrong so my sleep sentence would be extended. Or was it that, in some sane part of my mind, I wanted release from unreality badly enough to take any risk to prove that I was morally capable of returning to the real world?

It was a carrousel and I couldn't catch the brass ring no matter how many turns I went spinning through.

I hardly heard Horbit when he half-shouted at me as my men led him from the room. Glancing up sharply, I saw him straining purposefully against the bonds of muscle and narcotic that held him.

"You have to send me back now, Warden," he was shrilling. "You have to! I tried to coerce you with a gun. That's a crime, Warden—you *know* that's a crime! I have to be put to sleep!"

Keller flicked his mustache with a thick thumbnail. "How about that? You won't let a guy back into the sleepy-bye pads, so he pulls a gun on you to make you, and *that* makes him eligible. He couldn't lose, Warden. No, sir, he had it made."

My answer to Keller was forming, building up in my jaw muscles, but I took a pill and it went away.

"Hold him in the detention quarters," I said finally. "I'm going to make a study of this."

Keller winked knowingly and sauntered out of the office, his left hand swinging the blackjack the Committee had taken away from him a decade before.

The problem of what to do with Keller wasn't particularly atypical of the ones I had to solve daily and I wasn't going to let that worry me. Much.

I pressed my button to let Mrs. Engle know I was ready for the next interview.

THEY came. There were the hysterical relatives, the wives and mothers and brothers who demanded that their kin be Awakened because they were special cases, not really guilty, or needed at home, or possessed of such awesome talents and qualities as to be exempt from the laws of lesser men.

Once in a while I granted a parole for a prisoner to see a dying mother or if some important project was falling apart without his help, but most of the time I just sat with my eyes propped open, letting a sea of vindictive screeching and beseeching wailings wash around me.

The relatives and legal talent were spaced with hungry-eyed mystics who were convinced they could contemplate God and their



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navels both conscientiously as an incarnation of Gautama. To risk sounding religiously intolerant, I usually kicked these out pretty swiftly.

The onetime inmate who wanted back in after a reprieve was fairly rare. Few of them ever got *that* crazy.

But it was my luck to get another the same day, *the* day for me, as Horbit.

Paulson was a tall, lean man with sad eyes. The clock above his sharp shoulder bone said five till noon. I didn't expect him to take much out of my lunch hour.

"Warden," Paulson said, "I've decided to give myself up. I murdered a blind beggar the other night."

"For his pencils?" I asked.

Paulson shifted uneasily. "No, sir. For his money. I needed some extra cash and I was stronger than he was, so why shouldn't I take it?"

I examined the projection of his file. He was an embezzler, not a violent man. He had served his time and been released. Conceivably he might embezzle again, but the Committee saw to it that temptation was never again placed in his path. He would not commit a crime of violence.

"Look, Paulson," I said, a trifle testily, "if you have so little conscience as to kill a blind old man for a few dollars, where do you suddenly get enough guilt feelings to cause you to give yourself up?"

Paulson tried his insufficient best to smile evilly. "It wasn't conscience, Warden. I never lie awake a minute whenever I kill anybody. It's just — well, Dreaming isn't so bad. Last time I was Allen Pinkerton, the detective. It was exciting. A lot more exciting than the kind of life I lead."

I nodded solemnly. "Yes, no doubt strangling old men in the streets can be pretty dull for a red-blooded man of action."

"Yes," Paulson said earnestly, "it does get to be a humdrum routine. I've been experimenting with all sorts of murders, but I just don't seem to get much of a kick out of them now. I'd like to try it from the other end as Pinkerton again. Of course, if you can't arrange it, I guess I'll have to go out and see what I can do with, say, an ax." His eye glittered almost convincingly.

"Paulson, you know I could have you watched night and day if I thought you really were a murderer. But I can't send you back to the sleep vaults without proof and conviction for a crime."

"That doesn't sound very reasonable," Paulson objected. "Turning loose a homicidal maniac who is offering to go back to the vaults of his own free will just because you lack a little trifling proof of his guilt."



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"Sure," I told him, "but I don't want to share the same noose with you. My job is to keep the innocent out and the convicted in. And I do my job, Paulson."

"But you have to! If you don't, I'll have to go out and establish my guilt with another crime. Do you want a crime on your hands, Warden?"

I studied his record. There was a chance, just a chance . . .

"Do you want to wait voluntarily in the detention quarters?" I asked him.

He agreed readily enough.

I watched him out of the office and rang for lunch.

The news on the wall video was dull as usual. A man got tired of hearing peace, safety, prosperity and brotherly love all the time. I dug into my strained spinach, raw hamburger, and chewed up my white pill, my red pill, my ebony pill, and my second white pill. The gin and tomato juice took the taste away.

I was ready for the afternoon session.

MATRONS were finishing the messy job of dragging a hysterical woman out of the office when Keller came back. He had a stubborn look on his flattened, red face.

"New prisoner asking to see you personal," Keller reported. "Told him no. Okay?"

"No," I said. "He can see me. That's the law and you know it. He isn't violent, is he?" I asked in some concern. The room was still in disarray.

"Naw, he ain't violent, Warden. He just thinks he's somebody important."

"Sounds like a case for therapy, not Dreamland. Who does he think he is?"

"One of the Committee — Councilman Coleman."

"Mm-hmm. And who is he really, Captain?"

"Councilman Coleman."

I whistled. "What did they nail him on?"

"Misuse of authority."

"And he didn't get a suspended for that?"

"Wasn't his first offense. Still want to see him?"

I gave a lateral wave of my hand. "Of course."

My pattern of living — call it my office routine — had been reestablished through the day. I hadn't had a chance to brood much over the bombshell Coleman had tossed in my lap in the morning, but now I could think.

Coleman entered wearing the same black tunic, the same superior attitude. His black eyes fastened on me.

"Sit down, Councilman," I directed.

He deigned to comply.

I studied the files flashed before



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me. Several times before, Coleman had been guilty of slight misuses of his authority: helping his friends, harming his enemies. Not enough to make him be impeached from the Committee. His job was so hypersensitive that if every transgression earned dismissal, no one could hold the position more than a day. Even with the best intentions, mistakes can be taken for deliberate errors. Not to mention the converse. For his earlier errors, Coleman had first received a suspended sentence, then two terminal sentences to be fixed by the warden. My predecessors had given him first a few weeks, then a few months of sleep in Dreamland.

COLEMAN'S eyes didn't frighten me; I focused right on the pupils. "That was a pretty foul trick, Councilman. Did you hope to somehow frighten me out of executing this sentence by what you told me this morning?"

I couldn't follow his reasoning. Just how making me think my life was only a Dream such as I imposed on my own prisoners could help him, I couldn't see.

"Warden Walker," Coleman intoned in his magnificent voice, "I'm shocked. *I* am not personally monitoring your Dream. The Committee as a whole will decide whether you are capable of returning to the real world. Moreover, please don't get carried away. I'm not concerned with what you do to this sensory projection of myself, beyond how it helps to establish your moral capabilities."

"I suppose," I said heavily, "that I could best establish my high moral character by excusing you from this penal sentence?"

"Not at all," Councilman Coleman asserted. "According to the facts as you know them, I am 'guilty' and must be confined."

I was stymied for an instant. I had expected him to say that I must know that he was incapable of committing such an error and I must pardon him despite the misguided rulings of the courts. Then I thought of something else.

"You show symptoms of being a habitual criminal, Coleman. I think you deserve *life*."

Coleman cocked his head thoughtfully, concerned. "That seems rather extreme, Warden."

"You would suggest a shorter sentence?"

"If it were my place to choose, yes. A few years, perhaps. But life — no, I think not."

I threw up my hands. You don't often see somebody do that, but I did. I couldn't figure him. Coleman had wealth and power as a councilman in the real world, but I had thought somehow he wanted to escape to a Dream world. Yet he didn't want to be in for life, the way Paulson and Horbit did.



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There seemed to be no point or profit in what he had told me that morning, nothing in it for him.

Unless—

Unless what he said was literally true.

I stood up. My knees wanted to quit halfway up, but I made it. "This," I said, "is a difficult decision for me, sir. Would you make yourself comfortable here for a time, Councilman?"

Coleman smiled benignly. "Certainly, Warden."

I walked out of my office, slowly and carefully.

HORBIT was sitting in his detention quarters idly flicking through a book tape on the Civil War when I found him. The tic in his cheek marked time with every new page.

"President Lincoln," I said reverently.

Horbit looked up, his eyes set in a clever new way. "*You* call me that. Does it mean I am recovering? You don't mean now that I'm getting back my right senses?"

"Mr. President, the situation you find yourself in now is something stranger and more evil than any madness. I am not a phantom of your mind — I am a *real* man. This wild, distorted place is a *real* place."

"Do you think you can pull the wool over my eyes, you scamp? Mine eyes have seen the glory."

"Yes, sir." I sat down beside him and looked earnestly into his twitching face. "But I know you have always believed in the occult."

He nodded slowly. "I *have* often suspected this was hell."

"Not quite, sir. The occult has its own rigid laws. It is perfectly scientific. This world is in another dimension — one that is not length, breadth or thickness — but a real one nevertheless."

"An interesting theory. Go ahead."

"This world is more scientifically advanced than the one you come from — and this advanced science has fallen into the hands of a well-meaning despot."

Horbit nodded again. "The Jefferson Davis type."

He didn't understand Lincoln's beliefs very well, but I pretended to go along with him. "Yes, sir. He — our leader — doubts your abilities as President. He is not above meddling in the affairs of an alien world if he believes he is doing good. He has convicted you to this world in that belief."

He chuckled. "Many of my countrymen share his convictions."

"Maybe," I said. "But many here do not. I don't. I know you must return to guide the Reconstruction. But first you must convince our leader of your worth."

"How am I going to accomplish that?" Horbit asked worriedly.



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"You are going to have a companion from now on, an agent of the leader, who will pretend to be something he isn't. You must pretend to believe in what he claims to be, and convince him of your high intelligence, moral responsibilities, and qualities of leadership."

"Yes," Horbit said thoughtfully, "yes. I must try to curb my tendency for telling off-color jokes. My wife is always nagging me about that."

PAULSON was only a few doors away from Horbit. I found him with his long, thin legs stretched out in front of him, staring dismally into the gloom of the room. No wonder he found reality so boring and depressing with so downbeat a mood cycle. I wondered why they hadn't been able to do something about adjusting his metabolism.

"Paulson," I said gently, "I want to speak with you."

He bolted upright in his chair. "You're going to put me back to sleep."

"I came to talk to you about that," I admitted.

I pulled up a seat and adjusted the lighting so only his face and mine seemed to float bodiless in a sea of night, two moons of flesh.

"Paulson — or should I call you Pinkerton?—this will come as a shock, a shock I know only a fine analytical mind like yours could stand. You think your life as the great detective was only a Dream induced by some miraculous machine. But, sir, believe me: that life was *real*."

Paulson's eyes rolled slightly back into his head and changed their luster. "Then *this* is the Dream. I've thought—"

"No!" I snapped. "This world is also real."

I went through the same Fourth Dimension waltz as I had auditioned for Horbit. At the end of it, Paulson was nodding just as eagerly.

"I could be destroyed for telling you this, but our leader is planning the most gigantic conquest known to any intelligent race in the Universe. He is going to conquer Earth in all its possible futures and all its possible pasts. After that, there are other planets."

"He must be stopped!" Paulson shouted.

I laid my palm on his arm. "Armies can't stop him, nor can fantastic secret weapons. Only one thing can stop him: the greatest detective who ever lived. Pinkerton!"

"Yes," Paulson said. "I suppose I could."

"He knows that. But he's a fiend. He wants a battle of wits with you, his only possible foe, for the satisfaction of making a fool of you."



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"Easier said than done, my friend," Paulson said crisply.

"True," I agreed, "but he is devious, the devil! He plans to convince you that he also has been removed to this world from his own, even as you have. He will claim to be Abraham Lincoln."

"No!"

"Yes, and he will pretend to find you accidentally and get you to help him find a way back to his own world, glorying in making a fool of you. But you can use every moment to learn his every weakness."

"But wait. I know President Lincoln well. I guarded him on his first inauguration trip. How could this leader of yours fool me? Does he look like the President?"

"Not at all. But remember, the dimensional shift changes physical appearance. You've noticed that in yourself."

"Yes, of course," Paulson muttered. "But he couldn't hoax me. My keen powers of deduction would have seen through him in an instant!"

I SAW Horbit and Paulson happily off in each other's company. Paulson was no longer bored by a reality in which he was matching wits with the first master criminal of the paratime universe, and Horbit was no longer hopeless in his quest to gain another reality because he knew he was not merely insane now.

It was a pair of fantastic stories that no man in his right mind would believe — but that didn't make them invalid to a brace of ex-Sleepers. They *wanted* to believe them. The stories gave them what they were after—without me having to break the law and put them to sleep for crimes they hadn't committed.

They would find out some day that I had lied to them, but maybe by that time they would have realized this world wasn't so bad.

Fortunately, I was confident from their psych records that they were both incapable of ending their little game by homicide, no matter how justified they might think it was.

"Hey, Warden," Captain Keller bellowed as I approached my office door, "when are you going to let me throw that stiff Coleman into the sleepy-bye vaults? He's still sitting in there on your furniture as smug as you please."

"You don't sound as if you like our distinguished visitor very well," I remarked.

"It's not that. I just don't think he deserves any special privileges. Besides, it was guys like him that took away our nightsticks. My boys didn't like that. Look at me—I'm defenseless!"

I looked at his square figure. "Not quite, Captain, not quite."

Now was the time.



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I stretched out my wet palm toward the door.

Was or was not Coleman telling the truth when he said this life of mine was itself only a Dream? If it was, did I want to finish my last day with the right decision so I could return to some alien reality? Or did I deliberately want to make a mistake so I could continue living the opiate of my Dream?

Then, as I touched the door, I knew the only decision that could have any meaning for me.

Councilman Coleman didn't look as if he had moved since I had left him. He was unwrinkled, unperspiring, his eyes and mustache crisp as ever. He smiled at me briefly in supreme confidence.

I changed my decision then, in that moment. And, in the next, changed it back to my original choice.

"Coleman," I said, "you can get out of here. As warden, I'm granting you a five-year probation."

The councilman stood up swiftly, his eyes catching little sparks of yellow light. "I don't approve of your decision, Warden. Not at all. Unless you alter it, I'll be forced to convince the rest of the Committee that your decisions are becoming faulty, that you are losing your grip just as all your predecessors did."

My muscles relaxed in a spasm and it took the fresh flow of adrenalin to get me to the chair behind my desk. I took a pill. I took two pills.

"Tell me, Councilman, what happened to the offer to release me from this phony Dream? Now you are talking as if *this* world was the *real* one."

Coleman parted his lips, but then the planes of his face shifted into another pattern. "You never believed me."

"Almost, but not quite. You knew I was on the narrow edge in this kind of job, but I'm not as far out as you seemed to have thought."

"I can still wreck your career, you know."

"I don't think so. That would constitute a misuse of authority, and the next time you turn up before me, I'm going to give you *life* in Dreamland."

Coleman sat back down suddenly.

"You don't want life as a Sleeper, do you?" I pursued. "You did want a relatively *short* sentence of a few months or a few years. I can think of two reasons why. The answer is probably a combination of both. In the first place, you are a joy-popper with Dreams—you don't want to live out your life in one, but you like a brief Dream every few years like an occasional dose of a narcotic. In the second place, you probably have political reasons for wanting to hide out



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somewhere in safety for the next few years. The world isn't as placid as the newscasts sometimes make it seem."

HE didn't say anything. I didn't think he had to.

"You wanted to make sure I made a painfully scrupulous decision in your case," I went on. "You didn't want me to pardon you completely because of your high position, but at the same time you didn't want *too* long a sentence. But I'm doing you no favors. You get no time from me, Coleman."

"How did you decide to do this?" he asked. "Don't tell me you never doubted. We've all doubted since we found out about the machines: which was real and which was the Dream? How did you decide to risk this?"

"I acted the only way I could act," I said. "I decided I had to act as if my life was real and that you were lying. I decided that because, if all this were false, if I could have no more confidence in my own mind and my own senses than that, I didn't give a damn if it *were* all a Dream."

Coleman stood up and walked out of my office.

The clock told me it was after five. I began clearing my desk.

Captain Keller stuck his head in, unannounced. "Hey, Warden, there's an active one out here. He claims that Dreamland compromises His plan for the Free Will of the Universe."

"Well, escort him inside, Captain," I said.

I put away my pills. Solving simple problems such as the new visitor presented always helped me to relax.

—JIM HARMON

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# TIME KILLER

**Second of Four Parts**

**By ROBERT SHECKLEY**

SYNOPSIS

*THOMAS BLAINE, a young yacht designer, is driving back to New York when his car goes out of control and crashes into a passing car. Blaine is killed. He comes to life 152 years in the future, in a completely different body. Technicians are recording his reactions. He is being questioned by*

*MR. REILLY, a choleric old man, president of the Rex Corporation, which has snatched Blaine's mind into the future and set it into a host-body. When Reilly learns Blaine's name, he is almost uncontrollably angry. The wrong man has been saved from 1958 and a perfectly good body wasted! The situation is explained further by*

*MARIE THORNE, a cold and beautiful young woman, employed by Reilly, and in charge of the project that saved Blaine. From her, Blaine learns about*

*HEREAFTER, INC., of which Rex is a subsidiary. This corporation guarantees, for a very high fee, the absolute certainty of life after death. Blaine learns that some people survive naturally and pass on to the hereafter. But for the majority, the mind disintegrates with the death of the body — unless strengthened by Hereafter Inc.'s treatment. Blaine finds out more about the life after death. The most understandable part of it is*

*THE THRESHOLD, an interface region between Earth and the hereafter. Friendly spirits — such as Reilly's dead grandfather — inhabit this region and advise the living; and in the Threshold there*



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***Keeping his head was the least of Blaine's worries in this deadliest of skin games . . . aimed to fleece him of his borrowed body!***

**Illustrated by WOOD**

*are minds which have gone insane during the death trauma, and which sometimes appear on Earth as ghosts.*

*But even with proofs, the organized religions do not accept the scientific hereafter. Reilly hoped to crack this large potential market by bringing a religious leader from 1958 to 2112. This man's mind would pass through the Threshold, then be pulled into a host body. He would have seen the hereafter for himself and be able to endorse the product.*

*BUT the experiment failed. Instead they have Blaine—who remembers nothing about the Threshold. Blaine is, therefore, an embarrassment to Rex. Reilly offers him the expensive hereafter treatment free if Blaine will consent to commit suicide. Blaine refuses. Reilly hopes Blaine will change his mind when he witnesses a reincarnation.*

*By reincarnating, Reilly plans to be reborn in a younger man's body. Reincarnation is dangerous, but Reilly fears going to the hereafter even more.*

*FITZSIMMONS, whose body Reilly is going to take over, has sold himself on the open market, in return for the precious hereafter treatment. The reincarnation begins, but there is interference from a spirit who fights Reilly for possession of Fitzsimmons' body, and wins.*

*The new possessor of the host body can't remember who he is. He is barely able to control the corpselike host, which has been dead too long for a successful in-*



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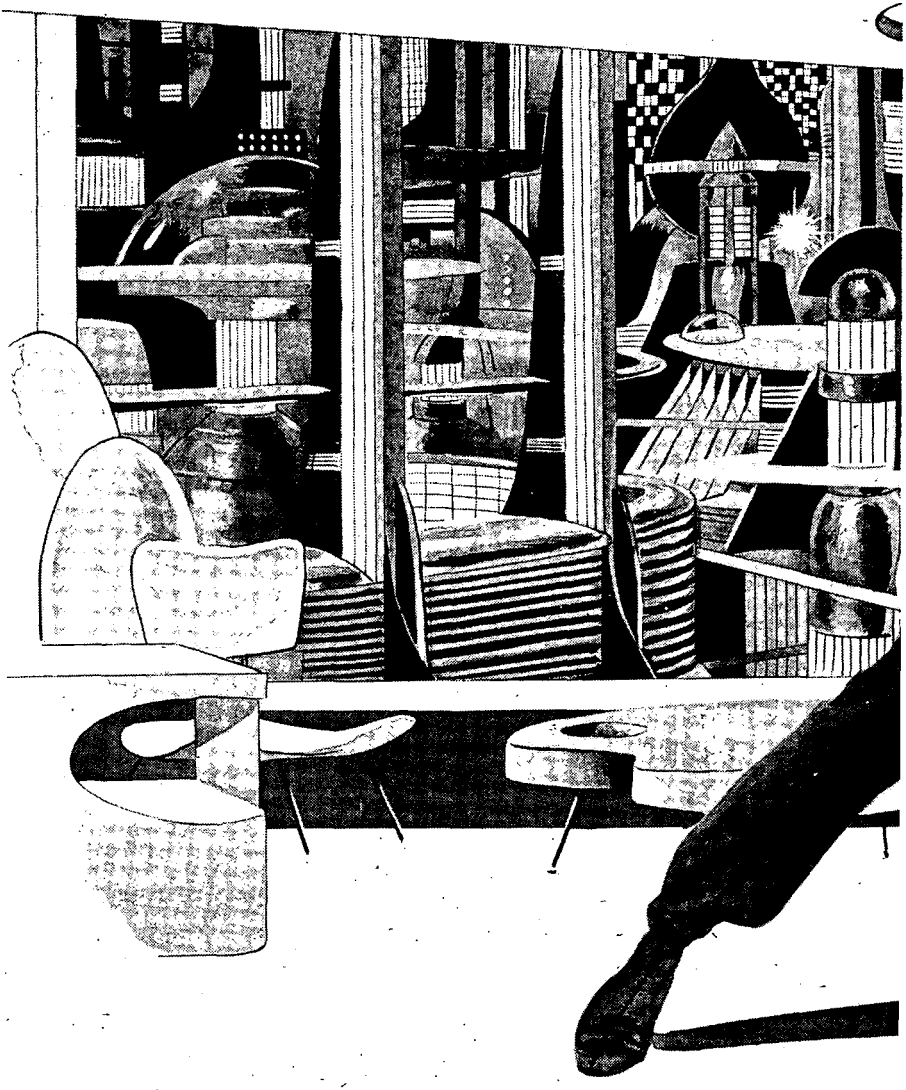



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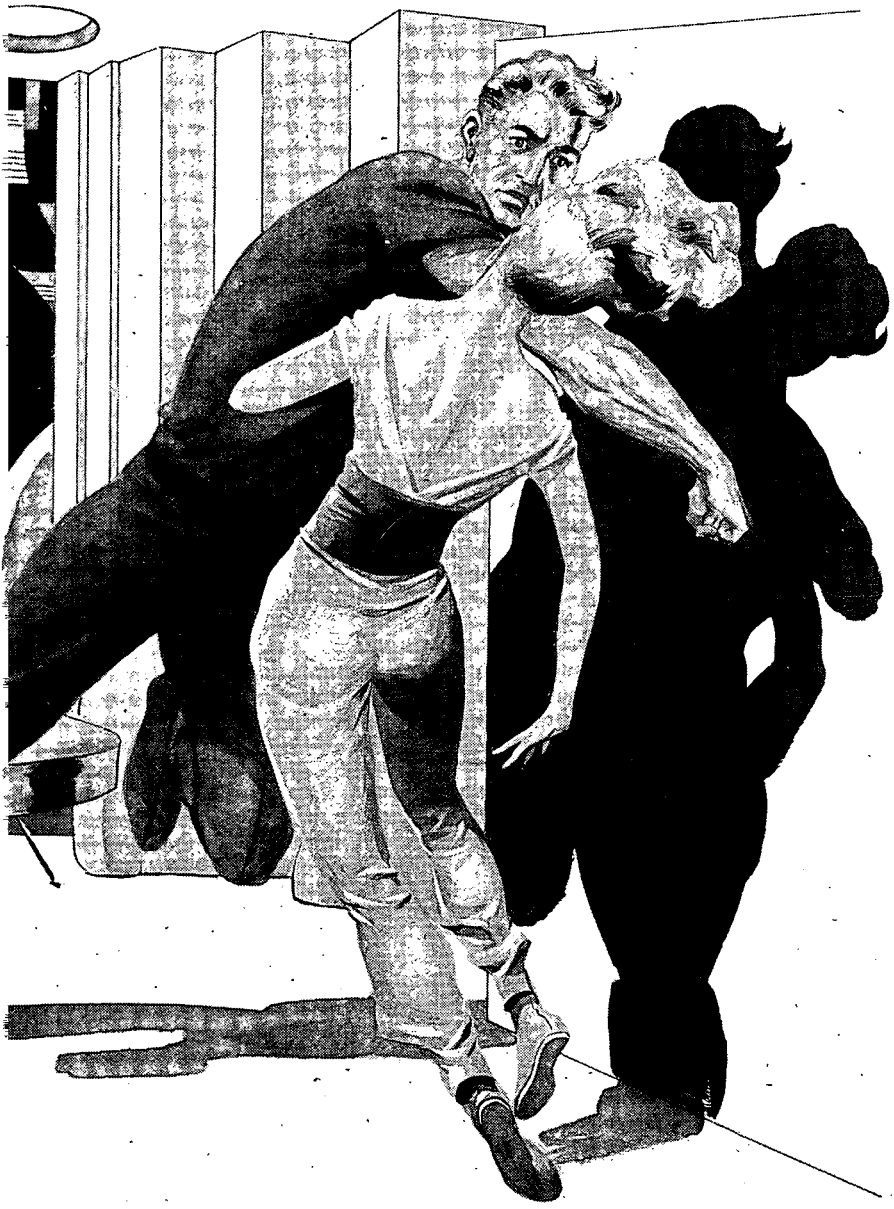



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*tegration of mind and body. A person in this state is referred to as a zombie.*

*The zombie is led away. As he passes Blaine, he seems to recognize him. He promises — or threatens — to see Blaine again, once he manages to recover his memory.*

*Marie Thorne takes Blaine away from Rex for his safety, and turns him over to*

*CARL ORC, for safekeeping. This tall, amiable Westerner takes Blaine on a round of New York's notorious pleasure spots. In a bar, they meet*

*JOE, a steerer for Transplant. This is an illegal sex game which employs a technique whereby one can temporarily inhabit the body of another man, woman, or animal. Blaine refuses. When he finishes his drink, he realizes too late that Orc has slipped him a knockout drop. Blaine recovers consciousness in a guarded room. There is another prisoner there named*

*RAY MELHILL, who tells him that they have been captured by Orc's gang of body-snatchers. Although there is an open market in host bodies, the supply is always scarce and costly. The body-snatchers sell to rich men who wish to attempt reincarnation.*

*When Orc and his men come for him, Blaine tries to resist. But he is seized, chloroformed, and carried away.*

9.

THOMAS Blaine's first act of consciousness was to find out whether he was still Thomas Blaine and still occupying his own body. The proof was there, apparent in the asking. They hadn't wiped his mind out yet.

He was lying on a divan, fully dressed. He sat up and heard the sound of footsteps outside, coming toward the door.

They must have overestimated the strength of the anesthetic. He still had a chance!

He moved quickly behind the door. It opened, and someone walked through. Blaine stepped out and swung.

He managed to check the blow, but there was still plenty of force left when his big fist struck Marie Thorne on the side of her shapely chin.

He carried her to the divan. It took a while before she recovered and looked fuzzily at him.

"Blaine," she said, "you're an idiot."

"I didn't know who it was," said Blaine. Even as he said it, he realized it wasn't true. He *had* recognized Marie Thorne a fractional second before the blow was launched; and his well-machined, responsive body could have recalled the punch even then. But an unperceived, uncontrollable fury had acted beneath his sane,



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conscious, morally aware level; fury had cunningly used urgency to avoid responsibility, had seized the deceiving instant to smash down the cold and uncaring Miss Thorne.

The act hinted at something Blaine didn't care to know about himself. He said, "Miss Thorne, what in hell is going on?"

"I'm sorry, Blaine. Orc apparently didn't understand why I was turning you over to him. He thought I wanted you disposed—well, I got you back from him as soon as I found out."

"Thanks," Blaine said. "Why are you doing this, anyhow?"

"For one thing, I knew the former owner of your body. For another — no, skip that."

She fingered her jaw, which was discolored and slightly swollen. "Well, shall we consider ourselves even? Or do you want another clout at me?"

"One was enough, thank you," Blaine said.

SHE stood up, somewhat unsteadily. Blaine put an arm around her to steady her and was momentarily disconcerted. He had visualized that trim body as whipcord and steel, but in fact it was flesh, firm, resilient, surprisingly soft. So close, he could see stray hairs escaping her tight coiffure, and a tiny mole on her forehead near the hairline. At that moment, Marie Thorne ceased as an abstraction for him and took shape as a human being.

"I can stand by myself," she said.

"Of course," said Blaine, but it took a long moment to release her.

"Under the circumstances," she said, looking at him steadily, "I think our relationship should remain on a strictly business level."

Wonder after wonder! *She* had suddenly begun viewing *him* as a human being, too; she was aware of him as a man, and disturbed by it. The thought gave him great pleasure. It was not, he told himself, that he liked Marie Thorne, or even desired her particularly. But he wanted very much to throw her off balance, scratch enamel off the facade, jar that damnable poise.

He said, "Why, certainly, Miss Thorne."

"I'm glad you feel that way," she told him. "Because, frankly, you're not my type."

"What is your type?"

"I like tall, lean men," she said. "Men with a certain grace, ease and sophistication."

"But—"

"Shall we have lunch?" she asked easily.

He followed her out of the room, raging inwardly. Had she been making fun of him? Tall, lean, graceful, sophisticated men? That's what he had been! And un-



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der this blond beefy wrestler's body, he still was, if only she had eyes to see it!

And who was jarring whose poise?

BLAINE suddenly remembered. "Melhill!"

"What?"

"Ray Melhill, the man I was locked up with! Look, Miss Thorne, could you possibly get him out? I'll pay for it as soon as I can. He's a damned nice guy."

She looked at him curiously. "I'll see what I can do."

She left the room. Blaine waited, rubbing his hands together, wishing he had Carl Orc's neck between them. Marie Thorne returned in a few minutes.

"I'm very sorry," she said. "I contacted Orc. Mr. Melhill was sold an hour after you were removed. I really am sorry. I didn't know."

"I was afraid we wouldn't make it in time," said Blaine sickly. "I think I'd like a drink."

"You need it," she agreed. "I'll take you to my place."

Marie's apartment was large, airy, pleasingly feminine, and furnished with a certain dramatic flair. There was more bright color than Blaine would have thought compatible with Miss Thorne's somber personality, but perhaps the vivid yellows and sharp reds expressed a wish of some sort, a compensation for the restraint of her business life. Or perhaps it was just the prevailing style. The apartment contained the sort of gadgetry that Blaine associated with the future: self-adjusting lighting and air-conditioning, self-conforming armchairs, and a push-button bar that produced a very adequate martini.

Marie Thorne went into one of the bedrooms. She returned in a high-collared lounging dress and sat down on a couch opposite him.

"Well, Blaine, what are your plans?"

"I thought I'd ask you for a loan."

"Certainly. Glad to help out."

"In that case, my plan is to find a hotel room and start looking for a job."

"It won't be easy," she said, "but I know some people who might—"

"I hope this doesn't sound too silly, but I'd rather find a job on my own."

"No, it doesn't sound silly. I just hope it's possible. How about some dinner?"

"Fine. Do you cook, too?"

"I set dials," she replied. "Let's see. How would you like a genuine Martian meal?"

"No, thanks," Blaine said. "Martian food is tasty, but you're hungry an hour later. Would you happen to have a steak around the place?"



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MARIE set the dials and her auto-chef did the rest, selecting the foods from pantry and freezer, peeling, unwrapping, washing and cooking them, sniffing and tasting them, seasoning and serving them, and ordering new items to replace those used. The meal was perfect, but Marie seemed oddly embarrassed about it. She apologized to Blaine for the completely mechanical operation. After all, he came from an age in which women had opened their own cans and done their own tasting; but they'd probably had more leisure time too.

The sun had set by the time they finished their coffee. Blaine said, "Thank you very much, Miss Thorne. Now if you could lend me that money, I'll get started."

She looked surprised. "At night?"

"I'll find a hotel room. You've been very kind, but I wouldn't want to presume any further—"

"You're not presuming. You can start on your own tomorrow."

"All right," Blaine said. His mouth was suddenly dry and his heart was pounding with suspicious rapidity. He knew there was nothing personal in her invitation, but his body didn't seem to understand. It insisted upon reacting hopefully, expectantly even, to the controlled and antiseptic Miss Thorne.

She gave him a bedroom and a pair of green pajamas. Blaine closed the door when she left, undressed and got into bed. The light went out when he told it to.

In a little while, just as his body had counted on, Miss Thorne came in wearing something white and gossamer.

They lay side by side in silence. Marie Thorne moved closer to him.

He said, "I thought you weren't attracted to my type."

"Not exactly. I said I *preferred* tall, lean men."

"I was once a tall, lean man."

"I suspected it," she said.

They were both silent. Blaine began to grow uncomfortable and apprehensive. What did this mean? Had she some fondness for him? Or was this simply a custom of the age, a sort of Eskimo hospitality?

"Miss Thorne," he said, "I wonder if—"

"Oh, be quiet!" she said, suddenly turning toward him, her eyes enormous in the shadowy room. "Do you have to question everything, Tom?"

Later, she said dreamily, "Under the circumstances, I think you can call me Marie."

IN the morning, Blaine showered, shaved and dressed. Marie dialed a breakfast for them. After they had eaten, she gave him a small envelope.



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"I can lend you more when you need it," she said. "Now about finding a job—"

"You've helped me very much," said Blaine. "The rest I'd like to do on my own."

"If possible. My address and telephone number are on the envelope. Please call me as soon as you have a hotel."

"I will," Blaine promised, watching her closely. There was no hint of the Marie of last night. It might have been a different person entirely. But her studied self-possession was reaction enough for Blaine. Enough, at least, for the moment.

At the door, she touched his arm. "Tom, please be careful. And call me."

"I will, Marie," Blaine said.

He went down into the city happy and refreshed, intent upon conquering the world.

## 10.

BLAINE'S first idea had been to make a round of the yacht-design offices. But he decided against it simply by picturing a yacht designer from 1806 walking into an office in 1958.

The quaint gentleman might be very talented, but how would that help him when he was asked what he knew about metacentric shelf analysis, flow diagrams, centers of effort, and the best locations for RDF and sonar? What company would pay him while he learned the facts about reduction gears, exfoliating paints, tank testing, propeller pitch, heat exchange systems, synthetic sailcloth and all the rest of the advances made in a century and a half of scientific progress?

Not a chance, Blaine decided. He couldn't walk into a design office 152 years behind the times and ask for a job. A job as *what?* Perhaps he could study and catch up to 2110 technology. But he'd have to do it on his own time.

Right now, he'd take anything he could get.

He went to a newsstand and purchased a microfilm *Times* and a viewer. He walked until he found a bench, sat down and turned to the classified ads. Quickly he skipped past the skilled categories, where he couldn't hope to qualify, and came to unskilled labor. He read:

"Set-up man wanted in auto-cafeteria. Requires only basic knowledge of robotics."

"Hull wiper wanted, Mar-Coling liner. Must be Rh positive and fortified anticlaustrophobiac."

"List man needed for hi-tensile bearing decay work. Needs simple jenkling knowledge. Meals included."

It was apparent to Blaine that even the unskilled labor of 2110 was beyond his present capacity.



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Turning the page to Employment for Boys, he read:

"Wanted, young man interested in slic-trug machinery. Good future. Must know basic calculus and have working knowledge Hootean Equations."

"Young Men wanted, salesmen's jobs on Venus. Salary plus Commission. Knowledge basic French, German, Russian and Ourescz."

"Delivery, Magazine, Newspaper boys wanted by Eth-Col agency. Must be able to drive a Sprening. Good knowledge of City required."

So he couldn't even qualify as a newsboy!

It was a depressing thought. Finding a job was going to be more difficult than he had imagined. Didn't anyone dig ditches or carry packages in this city? Did robots do all the menial work, or did you need a Ph.D even to lug a wheelbarrow? What sort of world was this?

HE turned to the front page of the *Times* for an answer, adjusted his viewer and read the news of the day:

A new spacefield was under construction at Oxa, New South Mars.

A poltergeist was believed responsible for several industrial fires in the Chicago area. Exorcism proceedings were under way.

Rich copper deposits had been discovered in the Sigma-G sector of the Asteroid Belt.

Doppelganger activities had increased in Berlin.

A new survey was being made of octopi villages in the Mindanao Deep.

A mob in Spenser, Alabama, lynched and burned the town's two local zombies. Legal action was being taken against the mob leaders.

A noted anthropologist declared the Tuamoto Archipelago in Oceania to be the last stronghold of 20th century simplicity.

The Atlantic Fish Herders' Association was holding its annual convention at the Waldorf.

A werewolf was unsuccessfully tracked in the Austrian Tyrol. Local villages were warned to keep a twenty-four-hour watch for the beast.

A bill was introduced into the House of Representatives to outlaw all hunts and gladiatorial events. It was defeated.

A berserker took four lives in downtown San Diego.

Helicopter fatalities reached the one million mark for the year.

Blaine put the newspaper aside, more depressed than ever. Ghosts, doppelgangers, werewolves, poltergeists . . .

He didn't like the sound of those vague, grim ancient words which today seemed to represent actual phenomena. He had already



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met a zombie. He didn't want to encounter any more of the dangerous side-effects of the hereafter.

He started walking again. He went through the theater district, past glittering marquees, posters advertising the gladiatorial events at Madison Square Garden, billboards heralding solidovision programs and sensory shows, flashing signs proclaiming overtone concerts and Venusian pantomime. Sadly, Blaine remembered that *he* might have been part of this dazzling fairyland if only Reilly hadn't changed his mind. He might be appearing at one of those theaters now, billed as the Man from the Past . . .

Of course! A Man from the Past, Blaine suddenly realized, had a unique and indisputable novelty value, an inherent talent. The Rex Corporation had saved his life in 1958 solely in order to use that talent. But they had changed their minds. Then what was to prevent him from using his novelty value for himself? And, for that matter, what else could he do? Show business looked like the only possible business for him.

BLAINE hurried into a gigantic office building and found six theatrical agents listed on the board. He picked Barnex, Scofield & Styles, and took the elevator to their offices on the 19th floor.

He entered a luxurious waiting room paneled with gigantic solidographs of smiling actresses. At the far end of the room, a pretty receptionist raised an inquiring eyebrow at him.

Blaine went up to her desk. "I'd like to see someone about my act."

"I'm so sorry," she said. "We're all filled."

"This is a very special act."

"I'm really terribly sorry. Perhaps next week."

"Look," Blaine said, "my act is really unique. You see, I'm a man from the past."

"I don't care if you're the ghost of Scott Merrivale," she said sweetly. "We're *filled*. Try us next week."

Blaine turned to go. A short, stocky man breezed past him, nodding to the receptionist.

"Morning, Miss Thatcher."

"Morning, Mr. Barnex."

Barnex! One of the agents! Blaine hurried after him and grabbed his sleeve.

"Mr. Barnex," he said, "I have an act—"

"Everybody has an act," said Barnex.

"But this act is unique!"

"Everybody's act is unique. Let go my sleeve, friend. Try us next week."

"I'm from the past!" Blaine cried, suddenly feeling foolish.

Barnex turned and stared at



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him. He looked as though he might be on the verge of calling the police, or Bellevue. But Blaine plunged recklessly on.

"I really am! he said. "I have absolute proof. The Rex Corporation snatched me out of the past. Ask them!"

"Rex?" Barnex said. "Yeah, I heard something about that snatch over at Lindy's . . . Hmmm. Come into my office, Mister—"

"Blaine, Tom Blaine." He followed Barnex into a tiny, cluttered cubicle. "Do you think you can use me?"

"Maybe," Barnex said, motioning Blaine to a chair. "It depends. Tell me, Mr. Blaine, what period of the past are you from?"

"I have an intimate knowledge of the nineteen thirties, forties and fifties. By way of stage experience, I did some acting in college, and a professional actress friend of mine once told me I had a natural way of—"

"That's 20th century?"

"Yes, that's right."

THE agent shook his head. "Too bad. Now if you'd been a sixth century Swede or a seventh century Jap, I could have found work for you. I've had no difficulty booking appearances for our first century Roman or our fourth century Saxon, and I could use a couple more like them. But it's damned hard finding anyone from those early centuries, now that time travel is illegal. And B.C. is completely out."

"But what about the 20th century?" Blaine asked.

"It's filled."

"Filled?"

"Sure. Ben Therler from 1953 gets all the available stage appearances."

"I see," Blaine said, getting slowly to his feet. "Thanks anyhow, Mr. Barnex."

"Not at all," said Barnex. "Wish I could help. If you'd been from any time or place before the 11th century, I could probably book you. But there's not much interest in recent stuff like the 19th and 20th centuries . . . Say, why don't you go see Therler? It isn't likely, but maybe he can use an understudy or something." He scrawled an address on a piece of paper and handed it to Blaine.

Blaine took it, thanked him again, and left.

In the street, he stood for a moment, cursing his luck. His one unique and indisputable talent, his novelty value, had been usurped by Ben Therler of 1953! Really, he thought, time travel should be kept more exclusive. It just wasn't fair to drop a man here and then ignore him.

He wondered what sort of man Therler was. Well, he'd find out. Even if Therler didn't need an understudy, it would be a pleas-



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ure and relief to talk to someone from home. And Therler, who had lived here longer, might have some ideas on what a 20th century man could do in 2110.

Blaine flagged a helicab and gave the address. In fifteen minutes, he was in Therler's apartment building, pressing the doorbell.

A SLEEK, chubby, complacent-looking man opened the door. He was wearing a pork-pie hat, a tweed jacket with heavily padded shoulders, a narrow regimental-stripe tie, pegged gray flannel slacks and orange suede shoes.

"You the photographer?" he asked. "You're too early."

Blaine shook his head. "Mr. Therler, you've never met me before. I'm from your own century. I'm from 1958."

"Is that so?" said Therler, with obvious suspicion.

"It's the truth," Blaine said. "I was snatched by the Rex Corporation. You can check my story with them."

Therler shrugged his shoulders. "Well, what is it you want?"

"I was hoping you might be able to use an understudy or something—"

"No, no, I never use an understudy," Therler said, starting to close the door.

"I didn't think you did. The real reason I came was just to talk to you. It gets pretty lonely being out of one's century. I wanted to talk to someone from my own age. I thought maybe you'd feel that way, too."

"Me? Oh!" Therler said, smiling with sudden stage warmth. "Oh, you mean about the good old twentieth century! I'd love to talk to you about it sometime, pal. Little old New York! The Dodgers and Yankees, the hansoms in the park, the roller-skating rink in Rockefeller Plaza. I sure miss it all! But I'm afraid I'm a little busy now."

"Certainly," Blaine said. "Some other time."

"Fine! I'd really love to!" said Therler, smiling even more brilliantly. "Call my secretary, will you, old man? Schedules, you know. We'll have a really great old gab some one of these days. I suppose you could use a spare dollar or two—"

Blaine shook his head.

"Then 'bye," Therler said heartily. "And do call soon."

Blaine hurried out of the building. It was bad enough being robbed of your novelty value; it was worse being robbed by an out-and-out phony, a temporal fraud who'd never been within a hundred years of 1953. The Rockefeller *roller*-skating rink! And those clothes! Everything about the man screamed counterfeit.



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But Blaine was probably the only man in 2110 who could detect the impostor.

THAT afternoon, Blaine purchased a change of clothing and a shaving kit. He found a room in a cheap hotel on Ninth Avenue. For the next week, he continued looking for work.

He tried the restaurants, but found that human dishwashers were a thing of the past. At the docks and spaceports, robots were doing most of the heavy work. One day he was tentatively approved for a position as package-wrapping inspector at Gimbel-Macy's. But the personnel department, after carefully studying his personality profile, irritability index and suggestibility rating, vetoed him in favor of a dull-eyed little man from Queens who held a master's degree in packaging.

Blaine was wearily returning to his hotel one evening when he recognized a face in the dense crowd. It was a man he would have known instantly, anywhere. He was about Blaine's age, a compact, red-headed, snub-nosed man with slightly protruding teeth and a small red blotch on his neck. He carried himself with a certain jaunty assurance, the unquenchable confidence of a man for whom something always turns up.

"Ray!" Blaine shouted. "Ray Melhill!" He pushed through the crowd and seized him by the arm. "Ray! How'd you get out?"

The man pulled his arm away and smoothed the sleeve of his jacket. "My name is not Melhill."

"It's not? Are you sure?"

"Of course I am sure," the man said, starting to move away.

Blaine stepped in front of him. "Wait a minute. You look exactly like him, even down to the radiation scar. Are you *sure* you aren't Ray Melhill, a flow-control man off the spaceship *Bremen?*"

"Quite certain," the man said coldly. "You have confused me with someone else, young man."

Blaine stared hard as the man started to walk away. Then he reached out, caught the man by a shoulder and swung him around.

"You dirty body-thieving swine!" Blaine shouted, his big right fist shooting out.

The man who so exactly resembled Melhill was knocked back against a building and slid groggily to the pavement. Blaine started for him, and people moved quickly out of his way.

"Berserker!" a woman screamed. Someone else took up the cry. Blaine caught sight of a blue uniform shoving through the crowd toward him.

A flathat! Blaine ducked into the crowd. He turned a corner quickly, then another, slowed to a walk and looked back. The po-



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liceman was not in sight. Blaine started walking again to his hotel.

It had been Melhill's body, but Ray no longer occupied it. There had been no last-minute reprieve for him, no final chance. His body had been taken from him and sold to the old man whose querulous mind wore the jaunty body like a suit of ill-fitting, too-youthful clothes.

Now Blaine knew his friend was really dead. He drank silently to him in a neighborhood bar before returning to the hotel.

BLAINE was stopped by the clerk as he passed the desk. "Blaine? Got a message for you. Just a minute."

Blaine waited, wondering whom it could be from. Marie? But he hadn't called Marie yet, and wasn't planning to until he found work.

The clerk came back and handed him a slip of paper. The message read: "There is a Communication awaiting Thomas Blaine at the Spiritual Switchboard, 23rd Street Branch. Hours, nine to five."

"I wonder how anybody knew where I was," Blaine said.

"Spirits got their ways," the clerk told him. "Man I know, his dead mother-in-law tracked him down through three aliases, a Transplant and a complete skin job. He was hiding from her in Ethiopia."

"I don't have any dead mother-in-law," said Blaine.

"No? Who you figure's trying to reach you?" the clerk asked.

"I'll find out tomorrow and let you know," Blaine said.

But his sarcasm was wasted. The clerk had already turned back to his correspondence course on Atomic Engine Maintainence.

11.

THE 23rd Street Branch of the Spiritual Switchboard was a large graystone building near Third Avenue. Engraved above the door was the statement: "Dedicated to Free Communication Between Those on Earth and Those Beyond."

Blaine entered the building and studied the directory. It gave floor and room numbers for Messages Incoming, Messages Outgoing, Translations, Abjurations, Exorcisms, Offerings, Pleas, and Exhortations. He wasn't sure which classification he fell under, or what the classifications signified, or even the purpose of the Spiritual Switchboard. He took his slip of paper to the information booth.

"That's Messages Incoming," a pleasant, gray-haired receptionist told him. "Straight down the hall to Room 32A."

"Thank you." Blaine hesitated, then asked, "Could you explain something to me?"



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"Certainly," the woman said. "What do you wish to know?"

"Well — I hope this doesn't sound too foolish — what *is* all this?"

The gray-haired woman smiled. "That's a difficult question to answer. In a philosophical sense, I suppose you might call the Spiritual Switchboard a move toward a greater oneness, an attempt to discard the dualism of mind and body, and to substitute —"

"No," Blaine said. "I mean literally."

"Literally? Why, the Spiritual Switchboard is a privately endowed, tax-free organization, chartered to act as a clearing house and center for communications to and from the Threshold Plane of the Hereafter. In some cases, of course, people don't need our aid and can communicate directly with their departed ones. But more often, there is a need for amplification. This center possesses the proper equipment to make the deceased audible to our ears. And we perform other services, such as abjurations, exorcisms, exhortations and the like, which become necessary from time to time when flesh interacts with spirit."

She smiled warmly at him. "Does that make it any clearer?"

"Oh, it does — yes, indeed," Blaine said faintly, "and thank you very much," and went down the hall to Room 32A.

IT was a small gray room with several armchairs and a loudspeaker set in the wall. Blaine sat down, wondering what was going to happen.

"Tom Blaine!" bawled a disembodied voice from the loudspeaker.

"Huh? What?" Blaine asked, jumping to his feet and moving toward the door.

"Tom! How are you, boy?"

Blaine, his hand on the doorknob, suddenly recognized the voice. "Ray Melhill?"

"Right! I'm up there where the rich folks go when they die! Pretty good, huh?"

"I guess it is, if you say so," Blaine answered uncertainly. "But, Ray, *how?* I thought you didn't have any hereafter insurance."

"I didn't. Let me tell you the whole story. They came for me maybe an hour after they took you. I was so damned angry, I thought I'd go out of my mind. I stayed angry right through the anesthetic, right through the wiping. I was still angry when I died."

"What was dying like?" Blaine asked.

"It was like exploding. I could feel myself scattering all over the place, growing big as the Galaxy, bursting into fragments, and the fragments bursting into smaller fragments, and all of them were *me*."

"And what happened?"

"I don't know. Maybe being so



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angry helped. I was stretched as far as I could go — any further and it wouldn't be me — and then I just simply came back together again. Some people do. Like I told you, a few out of every million have always survived without hereafter training. I was one of the lucky ones."

"Lucky," Blaine repeated bitterly. "I tried to do something for you, but you'd already been sold."

"I know," Melhill said. "Thanks anyhow, Tom. And say, thanks for popping that slob. The one wearing my body."

"You saw that?"

"I've been keeping my eyes open," Melhill said. "By the way, I like that Marie. Nice-looking kid."

"Thanks. Ray, what's the hereafter like?"

"I don't know."

"You don't?"

"I'm not *in* the hereafter yet, Tom. I'm in the Threshold. It's a preparatory stage, a sort of bridge between Earth and the hereafter. I wish I could explain. On Earth, I always wondered what the Threshold was like. No one could ever describe it. I suppose it bothers you."

"I'd like to know."

"Well, let me try. It's a sort of grayness, with Earth on one side and the hereafter on the other. Only it's not like that, because there aren't any directions. I mean both Earth and the hereafter are on the same side, sort of, only —"

"Superimposed?"

"No, not all all! Look, the hereafter is a sort of grayness, but it's all color, too. That's the secret, really. I mean once you understand that color is direction and form is position — no. Let me put it this way. Sounds and colors are the same, we'll start there. That's why the form part is so important for understanding direction, which is actually position. Are you getting any of this?"

"I'm afraid not," Blaine said. "It sounds all mixed up."

"IT'S perfectly clear to me," Melhill said, "but explaining is like talking about the Taj Mahal to a man who's been blind from birth. Only more so. Anyhow, let's just say that Earth is on one side and the hereafter on the other, and drop it there."

"Why don't you cross over?" Blaine asked.

"Not yet," Melhill said. "It's a one-way street into the hereafter. Once you cross over, you can't come back. There's no more contact with Earth."

Blaine thought about that for a moment. "Then when are you going to cross over, Ray?"

"I don't rightly know. I thought I'd stay in Threshold for a while and keep an eye on things."

"Keep an eye on me, you mean."



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"Well . . ."

"Thanks a lot, Ray, but don't do it. Go into the hereafter. I can take care of myself."

"Sure you can," Melhill said. "But I think I'll stick around for a while anyhow. You'd do it for me, wouldn't you? So don't argue. Now look, I suppose you know you're in trouble?"

Blaine nodded. "You mean the zombie?"

"For one, yes. I don't know who he is or what he wants from you, Tom, but it can't be good. You'd better be a long way off when he finds out. But that wasn't the trouble I meant."

"You mean I have more?"

"Afraid so. You're going to be haunted, Tom."

In spite of himself, Blaine laughed.

"What's so funny?" Melhill demanded indignantly. "You think it's a *joke* to be haunted?"

"I suppose not. But is it really so serious?"

"Lord, you're ignorant," Melhill said. "Do you know anything about ghosts? How they're made and what they want?"

"Tell me."

"Well, there are three possibilities when a man dies. First, his mind can just explode, scatter, dissipate; and that's the end of him. Second, his mind can hold together through the death trauma; and he finds himself in the Threshold, a spirit. I guess you know about those two."

"Go on," said Blaine.

"The third possibility is this: His mind breaks during the death trauma, but not enough to cause dissipation. He pulls through into the Threshold. But the strain has been permanently disabling. He's insane. And that, my friend, is how a ghost is born."

"Hmm," Blaine said. "So a ghost is a mind that went insane during the death trauma?"

"Right. He's insane, and he haunts."

"But why?"

"Ghosts haunt," Melhill said, "because they're filled with twisted hatred, anger, fear and pain. They won't go into the hereafter. They want to spend as much time as they can on Earth, where their attention is still fixed. They want to frighten people, hurt them, drive them insane. Haunting is the most asocial thing they can do; it's their madness. Look, Tom, since the beginning of mankind . . ."

SINCE the beginning of mankind, there have been ghosts, but their numbers have always been small. Only a few out of every million people managed to survive after death; and only a tiny percentage of those survivors went insane during the transition, and became ghosts.

But the impact of those few was



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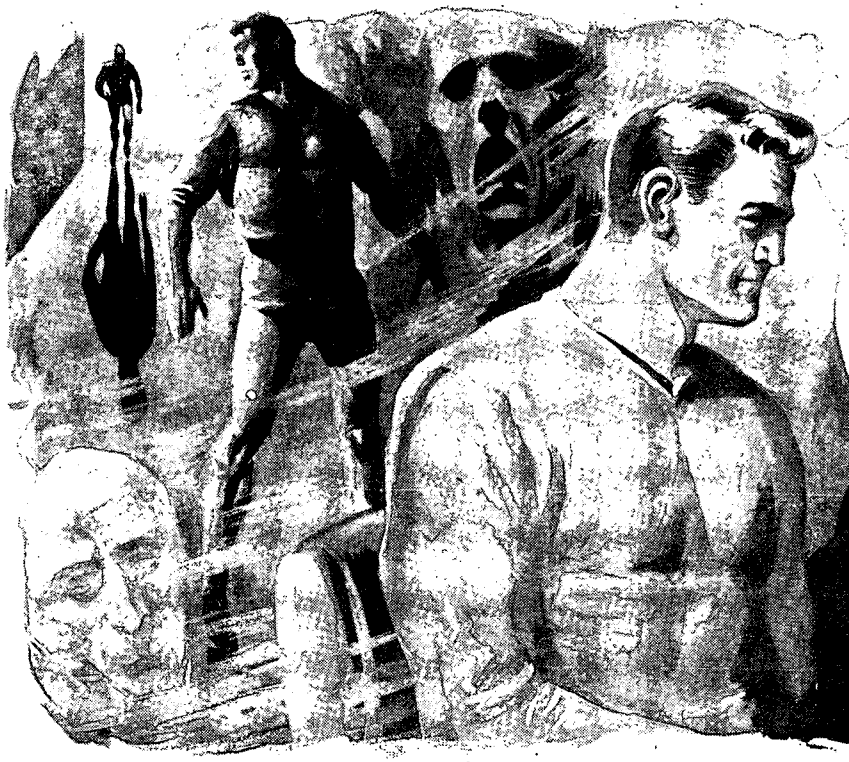

colossal upon a mankind fascinated by death, awed by the cold uncaring immobility of the corpse so recently quick and vital, shocked at the ghastly inapropos humor of the skeleton. Death's elaborate, mysterious figure seemed infinitely meaningful, its warning finger pointed toward the spirit-laden skies.

So for every genuine ghost, rumor and fear produced a thousand. Every gibbering bat became a ghost. Marsh-fires, flapping curtains and swaying trees became ghosts, and St. Elmo's fire, great-eyed owls, rats in the walls, foxes in the bush, all became ghostly evidence. Folklore grew and produced witch and warlock, evil little familiars, demons and devils, succubi and incubi, werewolf and vampire. For every ghost, a thousand were suspected; and for every



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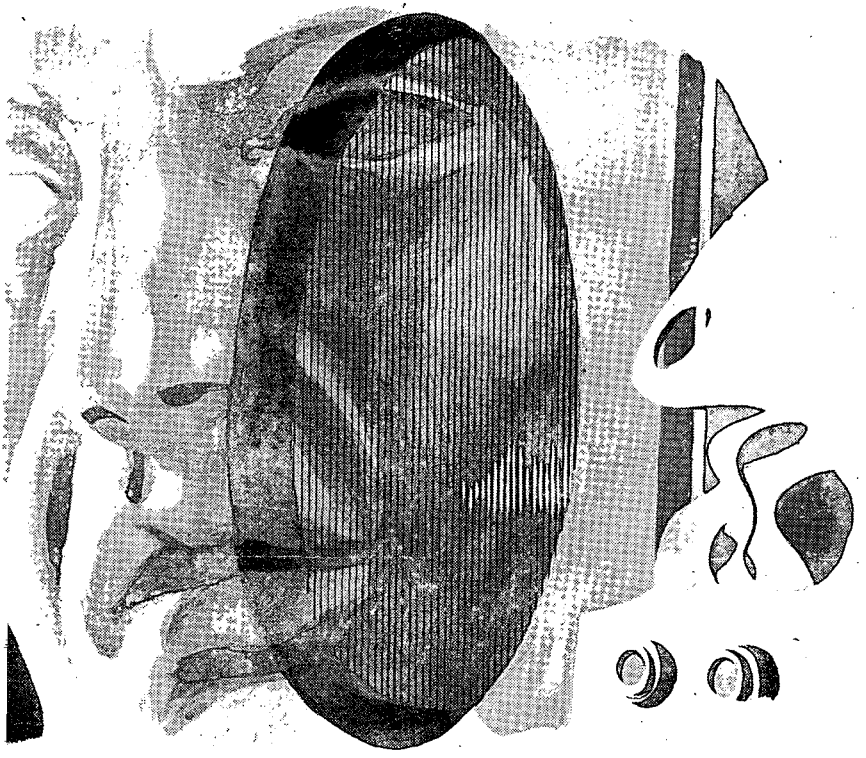

supernatural fact, a million were assumed.

Early scientific invesigators entered this maze, trying to discover the truth about supernatural phenomena. They uncovered countless frauds, hallucinations and errors of judgment. And they found a few genuinely *inexplicable* events, which, though interesting, were statistically insignificant.

The whole tradition of folklore came tumbling down. Statistically, there were no ghosts. But continually there was a sly, elusive *something* which refused to stand still and be classified. It was ignored for centuries, the occasional *something* which gave a basis and a reality to tales of incubi and succubi. Until at last scientific theory caught up with folklore, made a place for it in the realm of indisputable phenomena.



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WITH the discovery of the scientific hereafter, the irrational ghost became understandable as a demented mind inhabiting the misty interface between Earth and the hereafter. The forms of ghostly madness could be categorized like madness on Earth.

There were the melancholics, drifting disconsolately through the scenes of their great passion; the whispering hebephrenics, chattering gay and random nonsense; the idiots and imbeciles who returned in the guise of little children; the schizophrenics who imagined themselves to be animals, prototypes of vampire and Abominable Snowman, werewolf, weretiger, werefox, weredog.

There were the destructive stone-throwing and fire-setting ghosts, the poltergeists, and the grandiloquent paranoids who imagined themselves to be Lucifer or Beelzebub, Israfel or Azazael, the Spirit of Christmas Past, the Furies, Divine Justice, or even Death itself.

Haunting was madness. They wept by the old watch tower, these few ghosts upon whose gossamer shoulders rested the entire great structure of folklore, mingled with the mists around the gibbet, jabbered their nonsense at the séance. They talked, cried, danced and sang for the delectation of the credulous, until scientific observers came with their sober cold questions. Then they fled back to the Threshold, terrified of this onslaught of reason, protective of their delusions, fearful of being cured.

"So that's how it was," Melhill said. "You can figure out the rest. Since Hereafter, Inc., a hell of a lot more people are surviving after death. But, of course, a lot more are going insane on the way."

"Thus producing a lot more ghosts," said Blaine.

"Right, and one of them is after you," Melhill said, his voice growing faint. "So watch your step. Tom, I gotta go now."

"What kind of ghost is it?" Blaine asked. "Whose ghost? And why do you have to go?"

"It takes energy to stay on Earth," Melhill whispered. "I'm just about used up. Have to recharge. Can you still hear me?"

"Yes, go on."

"I don't know when the ghost will show himself, Tom. And I don't know who he is. I asked, but he wouldn't tell me. Just watch out for him."

"I'll watch out," Blaine said, his ear pressed to the loudspeaker. "Ray! Will I speak to you again?"

"I think so," said Melhill, his voice barely audible. "Tom, I know you're looking for a job. Try Ed Franchel, 322 West 19th Street. It's rough stuff, but it pays. And watch yourself."

"Ray!" Blaine shouted.



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There was no answer. The loudspeaker was silent, and he was alone in the gray room.

12.

THE address Ray Melhill had given him was a small, dilapidated brownstone near the docks. Blaine climbed the steps and pressed the ground-floor buzzer marked *Edward J. Franchel Enterprises.* The door was opened by a large, balding man in shirtsleeves.

"Mr. Franchel?" Blaine inquired.

"That's me," the balding man said, with a resolutely cheerful smile. "Right this way, sir."

He led Blaine into an apartment pungent with the odor of boiled cabbage. The front half of the apartment was arranged as an office, with a paper-cluttered desk, a dusty filing cabinet and several stiff-backed chairs. Past it, Blaine could see a gloomy living room. From the inner recesses of the apartment, a solido was blaring out a daytime show.

"Please excuse the appearance," Franchel said, motioning Blaine to a chair. "I'm moving into a regular office uptown just as soon as I find time. The orders have been coming in so fast and furious . . . Now, sir, what can I do for you?"

"I'm looking for a job," said Blaine.

"Hell," said Franchel, "I thought you were a customer." He turned in the direction of the blaring solido and shouted, "Alice, will you turn that goddam thing down?" He waited until the volume had lowered somewhat, then turned back to Blaine. "Brother, if business doesn't pick up soon, I'm going back to running a suicide booth at Coney. A job, huh?"

"That's right. Ray Melhill told me to try you."

Franchel's expression brightened. "How's Ray doing?"

"He's dead."

"Shame," Franchel said. "He was a good lad, though always a bit wild. He worked for me a couple times when the space pilots were on strike. Want a drink?"

Blaine nodded. Franchel went to the filing cabinet and removed a bottle of rye whisky labeled "Moonjuice." He found two shot glasses and filled them with a practiced flourish.

"Here's to old Ray," Franchel toasted. "I suppose he got himself boxed?"

"Boxed and crated," Blaine said. "I just spoke to him at the Spiritual Switchboard."

"Then he made Threshold!" Franchel exclaimed admiringly. "Friend, *we* should only have his luck. So you want a job? Well, maybe I can fix it. Stand up."

HE walked around Blaine, touched his biceps and ran a hand over his ridged shoulder



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muscles. He stood in front of Blaine, nodding to himself with downcast eyes, then feinted a quick blow at his face. Blaine's right hand came up instantly, in time to block the punch.

"Good build, good reflexes," said Franchel. "I think you'll do. Know anything about weapons?"

"Not much," Blaine said, wondering what kind of job he was getting into. "Just — ah — antiques. Garands, Winchesters, Colts."

"No kidding! You know, I always wanted to collect antique recoil arms. But no projectile or beam weapons are allowed on this hunt. What else you got?"

"I can handle a rifle with bayonet," Blaine said, thinking how his basic-training sergeant would have roared at that overstatement.

"You can? Lunges and parries and all? Well, I'll be damned. I thought bayonetry was a lost art. You're the first I've seen in fifteen years. Friend, you're hired."

Franchel went to his desk, scribbled on a piece of paper and handed it to Blaine.

"You go to that address tomorrow for your briefing. You'll be paid standard hunter's salary, two hundred dollars plus fifty a day for every working day. Have you got your own weapons and equipment? Well, I'll pick the stuff up for you, but it's deducted from your pay. And I take ten per cent off the top. Agreeable?"

"Sure," Blaine said. "Could you explain a little more about the hunt?"

"It's just a standard hunt. But don't go around talking about it. I'm not sure if hunts are still legal. I wish Congress would straighten out the Suicide and Permitted Murder Acts once and for all. A man doesn't know where he's at any more."

"Yeah," Blaine agreed in some confusion.

"They'll probably discuss the legal aspects at the briefing," Franchel said. "The other hunters will be there and the Quarry will tell you all you need to know. Say hello to Ray for me if you speak to him again. Tell him I'm sorry he got killed, but glad he made Threshold."

"I'll tell him," Blaine said. He decided not to ask any more questions for fear his ignorance might cost him the job. Whatever hunting involved, he and his body could surely handle it. And a job, any job, was as necessary now for his self-respect as for his dwindling wallet.

He thanked Franchel and left.

That evening, he ate dinner in an inexpensive diner and bought several magazines. He was elated at the knowledge of having found work, and sure that he was going to make a place for himself in this age.

His high spirits were dampened



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slightly when he glimpsed, on the way back to his hotel, a man standing in an alley watching him. The man had a white face and placid Buddha eyes, and his rough clothes hung on him like rags on a scarecrow.

It was the zombie.

Blaine hurried on to his hotel, refusing to anticipate trouble. After all, if a cat can look at a king, a zombie can look at a man, and where's the harm?

This reasoning didn't prevent him from having nightmares until dawn.

EARLY the next day, Blaine walked to 42nd Street and Park Avenue to catch a bus to the briefing. While waiting, he noticed a disturbance on the other side of 42nd Street.

A man had stopped short in the middle of the busy pavement. He was laughing to himself and people were beginning to edge away from him. He was in his fifties, Blaine judged, dressed in quiet tweeds, bespectacled, a little overweight. He carried a small briefcase and looked undistinguishable from other businessmen.

Abruptly he stopped laughing. He unzipped his briefcase and removed from it two long, slightly curved daggers. He flung the briefcase away and followed it with his glasses.

"Berserker!" someone yelled.

The man plunged into the crowd, both daggers flashing. People started screaming and the crowd scattered before him.

"Berserker, berserker!"

"Call the flathats!"

"Watch *out!* Berserker!"

One man was down, clutching his torn shoulder and swearing. The berserker's face was fiery red now and spittle drooled from his mouth. He waded deeper into the dense crowd; people knocked each other down in their efforts to escape. A woman shrieked as she was pushed off balance and her armload of parcels scattered across the pavement.

The berserker swiped at her left-handed, missed, and plunged deeper into the crowd.

Blue-uniformed police appeared, six or eight of them, sidearms out. "Everybody down!" they shouted. "Flatten! Everybody down!"

All traffic had stopped. The people in the berserker's path flung themselves to the pavement. On Blaine's side of the street, people were also flattening against the pavement.

A freckled girl of perhaps twelve tugged at Blaine's arm. "Come on, mister, get down! You wanna get beamed?"

Blaine lay down beside her. The berserker had turned and was running back toward the policemen, screaming wordlessly and waving his knives.



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Three of the policemen fired at once, their weapons throwing a pale yellowish beam which flared red when it struck the berserker. He screamed as his clothing began to smolder, turned, and tried to escape.

A BEAM took him square in the back. He flung both knives at the policemen and collapsed.

An ambulance dropped down with whirring blades and quickly loaded the berserker and his victims. The policemen began breaking up the crowd that had gathered around them.

"All right, folks, it's all over now. Move along!"

The crowd began to disperse. Blaine stood up and brushed himself off. "What was that?" he asked.

"It was a berserker, silly," the freckled girl said. "Couldn't you see?"

"I saw. Do you have many?"

She nodded proudly. "New York has more berserkers than any other city in the world except Manila, where they're called amokers. But it's all the same thing. We have maybe fifty a year."

"More," a man said. "Maybe seventy, eighty a year. But this one didn't do so good."

A small group had gathered near Blaine and the girl. They were discussing the berserker much as Blaine had heard strangers in his own time talk at the scene of an automobile accident.

"How many did he get?"

"Only five, and I don't think he killed any of them."

"His heart wasn't in it," an old woman said. "When I was a girl, you couldn't stop them so easily."

"Well, he picked a bad spot," commented the freckled girl. "This corner is crawling with flathats. A berserker can hardly get started before he's beamed."

A big policeman came over. "All right, folks, break it up. The fun's over, move along now."

The group dispersed. Blaine caught his bus, wondering why fifty or more people chose to berserk in New York every year. Sheer nervous tension? A demented form of individualism? Adult delinquency?

It was one more of the things he would have to find out about the world of 2110.

13.

THE address was a penthouse high above Park Avenue in the Seventies. A butler admitted him to a spacious room where chairs had been set up in a long row. The dozen men occupying the chairs were a loud, tough, weatherbeaten bunch, carelessly dressed and ill at ease in such rarefied surroundings. Most of them knew each other.



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"Hey, Otto! Back in the hunting game?"

"Yah. No money."

"Knew you'd come back, old boy. Hi, Tim!"

"Hi, Bjorn. This is my last hunt."

"Sure it is. Last till next time."

"No, I mean it. I'm buying a seed-pressure farm in the North Atlantic Abyss. I just need a stake."

"You'll drink up your stake."

"Not this time."

"Hey, Theseus! How's the throwing arm?"

"Good enough, Chico. Qué tal?"

"Not too bad, kid."

"There's Sammy Jones, always last in."

"I'm on time, ain't I?"

"Ten minutes late. Where's your sidekick?"

"Sligo? Dead. That Asturias hunt."

"Tough. Hereafter?"

"Don't know. Haven't heard from him."

A man entered the room and called out, "Gentlemen, your attention, please!"

He advanced to the center of the room and stood, hands on his hips, facing the row of hunters. He was a slender, sinewy man of medium height, dressed in riding breeches and an open-necked shirt. He had a small, carefully tended mustache and startling blue eyes in a thin, tanned face. For a few seconds, he looked the hunters over, while they coughed and shifted their feet uncomfortably.

At last he said, "Good morning, gentlemen. I am Charles Hull, your employer and Quarry." He gave them a smile of no warmth. "First, gentlemen, a word concerning the legality of our proceedings. There has been some recent confusion about this. My lawyer has looked into the matter fully and will explain. Mr. Jensen."

A SMALL, nervous-looking man came into the room, pressed his spectacles firmly against his nose and cleared his throat.

"Yes, Mr. Hull. Gentlemen, as to the present legality of the hunt: In accordance with the revised statutes to the Suicide Act of 2102, any man protected by Hereafter insurance has the right to select any death for himself, at any time and place, and by any means, as long as those means do not constitute cruel and unnatural abuse. The reason for this fundamental 'right to die' is obvious: The courts do not recognize physical death as death *per se,* if said death does not involve the destruction of the mind. Providing the mind survive, the death of the body is of no more moment, legally, than the sloughing of a fingernail. The body, by the latest Supreme Court decision, is considered an appendage of the mind, its creature, to be dis-



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posed of as the mind directs."

During this explanation, Hull had been pacing the room with quick, catlike steps. He stopped now and said, "Thank you, Mr. Jensen. So there is no questioning my right to choose my time and way of dying. Nor is there any illegality in my selecting one or more persons such as yourselves to perform the act for me. And your own actions are considered legal under the Permitted Murder section of the Suicide Act. All well and good. The only legal question arises in a recent appendage to the Suicide Act."

He nodded to Mr. Jensen.

"The appendage states," Jensen said, "that a man can select any death for himself, at any time and place, by any means, etcetera, *so long as that death is not physically injurious to others.*"

"That," said Hull, "is the troublesome clause. Now a hunt is a legal form of suicide. A time and place are arranged. You, the hunters, chase me. I, the Quarry, flee. You catch me, kill me. Fine! Except for one thing."

He turned to the lawyer. "Mr. Jensen, you may leave the room. I do not wish to implicate you."

After the lawyer had left, Hull said, "The one problem remaining is, of course, the fact that I will be armed and trying my very best to kill *you*. Any of you. All of you. And *that* is illegal."

Hull sank gracefully into a chair. "The crime, however, is mine, not yours. I have employed you to kill me. You have no idea that I plan to protect myself, to retaliate. That is a legal fiction, but one which will save you from becoming possible accesories to the fact. If I am caught trying to kill one of you, the penalty will be severe. But I will not be caught. One of you will kill me, thus putting me beyond the reach of human justice. If I should be so unfortunate as to kill *all* of you, I shall complete my suicide in the old-fashioned manner, with poison. But that would be a disappointment to me. I trust you will not be so clumsy as to let that happen. Any questions?"

THE hunters were murmuring among themselves:

"Slick fancy-talking bastard."

"Forget it. All Quarries talk like that."

"Thinks he's better than us, him and his classy legal talk."

"We'll see how good he talks with a bit of steel through him."

Hull smiled coldly. "Excellent. I believe the situation is clear. Now, if you please, tell me what your weapons are."

One by one, the hunters answered:

"Mace."

"Net and trident."

"Spear."



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"Morning-star."

"Bola."

"Scimitar."

"Bayonet rifle," Blaine said when his turn came.

"Broadsword."

"Battle-axe."

"Saber."

"Thank you, gentlemen," Hull said. "I will be armed with a rapier, naturally, and no armor. Our meeting will take place Sunday, at dawn, on my estate. The butler will give each of you a paper containing full instructions on how to get there. Let the bayonet man remain. Good morning to the rest of you."

The hunters left. Hull said, "Bayonetry is an unusual art. Where did you learn it?"

Blaine hesitated, then said, "In the Army, 1943 to 1945."

"You're from the past?"

Blaine nodded.

"Interesting," Hull said, with no particular sign of interest. "Then this, I daresay, is your first hunt?"

"It is."

"You appear a person of some intelligence. I suppose you have your reasons for choosing so hazardous and disreputable an employment?"

"I'm low on funds," Blaine said, "and I can't find anything else to do."

"Of course," said Hull, as though he had known it all along. "So you turned to hunting. Yet hunting is not a thing merely to turn to; and hunting the beast Man is not for everyone. The trade calls for certain special abilities, not the least of which is the ability to kill. Do you think you have that innate talent?"

"I believe so," Blaine said, though he hadn't considered the question until now.

"I wonder," Hull mused. "In spite of your bellicose appearance, you don't seem the type. What if you find yourself incapable of killing me? What if you hesitate at the crucial moment when steel grates on steel?"

"I'll chance it," Blaine said.

HULL nodded agreeably. "And so will I. Perhaps, hidden deep within you, a spark of murder burns. Perhaps not. This doubt will add spice to the game—though you may not have time to savor it."

"That's my worry," Blaine said, feeling an intense dislike for his elegant and rhetorical employer. "Might I ask you a question?"

"Consider me at your service."

"Thank you. Why do you wish to die?"

Hull stared at him, then burst into laughter. "Now I *know* you're from the past! What a question!"

"Can you answer it?"

"Of course," Hull said. He leaned back in his chair, and his



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eyes took on the distant look of a man dictating his memoirs. "I am forty-three years old and weary of nights and days. I am a wealthy man and an uninhibited one. I have experimented, contrived, laughed, wept, loved, hated, tasted and drunk — my fill. I have sampled all that Earth and elsewhere have to offer me, and I choose not to tediously repeat the experience. When I was young, I pictured this excellent green planet revolving mysteriously around its flamboyant yellow luminary as a treasure trove, a brass box of delights inexhaustible in content and immeasurable in their effect upon my ever-eager desires.

"But now, sadly, I have lived longer and have witnessed sensation's end. And now I see with what obese complacency our fat round Earth circles, at servile distance and unvarying pace, its gaudy, dreaded star. And the imagined treasure chest of the Earth seems now a child's painted toy box, shallow in its contents and mediocre in its effect upon nerves too quickly deadened to all delight."

Hull glanced at Blaine to note the effect of his words, and then went on.

"Boredom stretches before me now like a vast, arid plain — and I choose not to be bored. I choose, instead, to move on, move forward, move out, to sample Earth's last and greatest adventure — the adventure of Death, gateway to the afterlife. Can you understand that?"

"Certainly," Blaine said, irritated yet impressed by Hull's theatricals. "But what's the hurry? Life might have some good things still in store for you. And death is inevitable. Why rush it?"

"Spoken like a true 20th century optimist," said Hull, laughing. "'Life is real, life is earnest...' In your day, one *had* to believe that life was real and earnest. What alternative was there? How many of you really believed in a life after death?"

"That doesn't alter the validity of my point," Blaine argued, hating the stodgy, cautious, reasonable position he was forced to assume.

"But it does! The perspective on life and death has changed now. Instead of Longfellow's prosy advice, we follow Nietzsche's dictum — to die at the right time! Intelligent people don't clutch at the last shreds of life like drowning men clinging to a bit of board. They know that the body's life is only an infinitesimal portion of Man's total existence. Why shouldn't they speed the body's passing by a few years, if they so desire? Why shouldn't those bright pupils skip a grade or two of school? Only the frightened, the stupid, the uneducated grasp at every possible monotonous second on Earth."



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"The frightened, stupid and uneducated," Blaine repeated. "And the unfortunates who can't afford Hereafter insurance."

"WEALTH and class have their privileges," Hull said, smiling faintly, "and their obligations as well. One of those obligations is the necessity of dying at the right time, before one becomes a bore to one's peers and a horror to oneself. But the deed of dying transcends class and breeding. It is every man's patent of nobility, his summons from the king, his knightly adventure, the greatest deed of his life. And how he acquits himself in that lonely and perilous enterprise is his true measure as a man."

Hull's blue eyes were fierce and glittering. He said, "I do not choose to experience this crucial event in bed. I do not wish a dull, tame, commonplace death to sneak over me disguised as sleep. I choose to die fighting!"

Blaine nodded in spite of himself and felt regret at his own prosaic death. A car accident! How dull, tame, commonplace! And how strange, dark, atavistic and noble seemed Hull's lordly selection of death. Pretentious, of course, but then life itself was a pretension in the vast universe of unliving matter. Hull was like an ancient Japanese nobleman calmly kneeling to perform the ceremonial act of hara-kiri, and emphasizing the importance of life in the very selection of death. But hara-kiri was a passive Eastern avowal, while Hull's manner of dying was a Western death, fierce, violent, exultant.

It was admirable. But intensely irritating to a man not yet prepared to die.

Blaine said, "I have nothing against you or any other man choosing his own death. But what about the hunters you plan to kill? They haven't chosen to die and they have no assurance they'll survive in the hereafter."

Hull shrugged his shoulders. "They choose to live dangerously. In Nietzsche's phrase, they prefer to run risk and danger, and play dice with death. Blaine, have you changed your mind?"

"No."

Then we will meet Sunday."

Blaine went to the door and took his paper of instructions from the butler. As he was leaving, he said, "I wonder if you've considered one last thing."

"What is that?" Hull asked.

"You must have thought of it," Blaine said. "The possibility that this whole elaborate setup — the scientific hereafter, voices of the dead, ghosts — is merely a gigantic hoax, a money-making fraud perpetrated by Hereafter, Inc."

Hull stood perfectly still. When he spoke, there was a hint of anger



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in his voice. "That is *quite* impossible. Only a very uneducated man could think such a thing."

"Maybe," Blaine said. "But wouldn't you look silly if it *were* a hoax! Good morning, Mr. Hull."

He left, glad to have shaken up that smooth, fancy, rhetorical smugness even for a moment—and sad that his own death had been so dull, tame and commonplace.

14.

THE following day, Saturday, Blaine went to Franchel's apartment for his rifle, bayonet, hunter's uniform and pack. He was given half his salary in advance, less ten per cent and the cost of the equipment. The money was very welcome, for he had been down to three dollars and change.

He went to the Spiritual Switchboard, but Melhill had left no further messages for him. He returned to his hotel room and spent the afternoon practicing lunges and parries.

That evening, Blaine found himself tense and despondent, nervous at the thought of the hunt beginning in the morning. He went to a small West Side cocktail lounge that had been designed to resemble a 20th century bar, with a dark gleaming bar, wooden stools, booths, a brass rail, and sawdust on the floor. He slid into a booth and ordered beer.

The classic neon lights glowed softly and a genuine antique jukebox played the sentimental tunes of Glenn Miller and Benny Goodman. Blaine sat hunched over his glass of beer, drearily asking himself who and what he was.

Was it truly *he* taking casual employment as a hunter and killer of men?

Then what happened to *Tom Blaine,* the former designer of sailboats, former listener to high-fidelity music, former reader of choice books, former viewer of good plays? What happened to that quiet, sardonic, non-aggressive man?

Surely that man, housed in his slender, nervous, unassuming body, would never choose to kill!

Would he?

Was that familiar and mourned Blaine defeated and smothered by the large, square-muscled, quick-reflexed fighter's body he had acquired? And was that body, with its own peculiar glandular secretions dripping into the dark bloodstream, its own distinct and configurated brain, its own system of nerves and signals and responses—was that domineering body responsible for everything, dragging its helpless owner into murderous violence?

Blaine rubbed his eyes and told himself that he was dreaming nonsense. The truth was simply this: He had died through circum-



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stances beyond his control, been reborn in the future, and found himself unemployable except as a hunter. Q.E.D.

But that rational explanation didn't satisfy him and he had no time to search out the slippery and elusive truth.

He was no longer a detached observer of 2110. He had become a biased participant, an actor instead of an onlooker, with all of an actor's thoughtless sweep and rush. Action was irresistible; it generated its own momentary truth. The brakes were off and the engine Blaine was rolling down the steep hill Life, gathering momentum but no moss. Perhaps this, now, was his last chance for a look, a summing up, a measured choice . . .

But it was already too late, for a man slid into the booth opposite him like a shadow across the world. And Blaine was looking into the white and impassive face of the zombie.

"GOOD evening," said the zombie.

"Good evening," Blaine said steadily. "Would you care for a drink?"

"No, thank you. My system doesn't respond to stimulation."

"Sorry to hear it," said Blaine.

The zombie shrugged his shoulders. "I have a name now," he said. "I decided to call myself Smith, until I remember my real name. Smith. Do you like it?"

"It's a fine name."

"Thank you. I went to a doctor," Smith said. "He told me my body's no good. No stamina, no recuperative powers."

"Can't you be helped?"

Smith shook his head. "The body's definitely zombie. I occupied it much too late. The doctor gives me another few months at most."

"Too bad," said Blaine, feeling nausea rise in his throat at the sight of that thick-featured, leaden-skinned face with its unharmonious features and patient Buddha's eyes.

Smith sat slack and unnatural in rough workman's clothes, his black-dotted white face close-shaven and smelling of strong lotion. But he had changed. Already Blaine could see a certain leathery dryness in the once-pliant skin, certain striations in the flesh around the eyes, nose and mouth, minute creases in the forehead like toolmarks in old leather. And, mingled with the heavy after-shaving lotion, Blaine thought he could sense the first faint odor of dissolution.

"What do you want with me?" Blaine asked.

"I don't know."

"Then leave me alone."

"I can't do that," Smith said apologetically.



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"Do you want to kill me?" Blaine persisted, his throat dry.

"I don't know! I can't remember! Kill you, protect you, maim you, love you — I don't know yet! But I'll remember soon, Blaine, I promise!"

"Leave me alone," warned Blaine, his muscles tensing.

"I can't," Smith said. "Don't you understand? I know nothing except you. Literally nothing! I don't know this world or any other, no person, face, mind or memory. You're my only landmark, the center of my existence, my only reason for living."

"Stop it!"

"But it's true! Do you think I *enjoy* dragging this tattered flesh through the streets? What good is life with no hope before me and no memory behind me? Death is better! Life means filthy decaying flesh, and death is pure spirit! I've thought about it, dreamed about it, beautiful fleshless death! But one thing stops me. I have *you*, Blaine, to keep me going!"

"Get out of here," Blaine said, nausea bitter in his mouth.

"*You*, my sun and moon, my stars, my Earth, my total universe, my life, my reason, my friend, enemy, lover, murderer, wife, father, child, husband—"

Blaine's fist shot out, striking Smith high on the cheekbone. The zombie was flung back in the booth. His expression did not change, but a great purple bruise appeared on his lead-colored cheekbone.

"*Your* mark!" Smith said.

Blaine's fist, poised for another blow, dropped.

Smith stood up. "I'm going. Take care of yourself, Blaine. Don't die yet! I need you. Soon I'll remember, and I'll come to you."

Smith, his slack, bruised face impassive, left the bar.

Blaine ordered a double whisky and sat for a long time over it, trying to still the shaking in his hands.

15.

BLAINE arrived at the Hull estate by rural jetbus, an hour before dawn. He was dressed in a traditional hunter's uniform — khaki shirt and slacks, rubber-soled shoes and wide-brimmed hat. Slung over one shoulder was his field pack; over the other, he carried his rifle and bayonet in a plastic bag.

A servant met him at the outer gate and led him to the low, rambling mansion. Blaine learned that the Hull estate consisted of ninety wooded acres in the Adirondack Mountains between Keene and Elizabethtown.

Here, the servant told him, Hull's father had died at the age of fifty-one, taking the lives of



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six hunters with him before a saber man slashed his head off. Glorious death! Hull's uncle, on the other hand, had chosen to berserk in San Francisco, a city he had always loved. The police had to beam him twelve times before he dropped, and he took seven bystanders with him. The newspapers made much of the exploit and accounts of it were preserved in the family scrapbook.

It just went to show, the garrulous old retainer pointed out, the difference in temperaments. Some, like the uncle, were friendly, fun-loving men who wanted to die in a crowd, attracting an enviable amount of attention. Others, like the present Mr. Hull, were more given to the love of solitude and nature.

Blaine nodded politely to all this and was taken to a large rustic room where the hunters were assembled, drinking coffee and honing a last razor edge to their weapons. Light flashed from the blued-steel broadsword and silvery battle-axe, wavered along the polished spearhead and glinted frostily from the diamond points of the mace and morning-star. At first glance, Blaine thought it looked like a scene from medieval times. But on second thought he decided it was more like a movie set.

"Pull up a chair, pal," the axeman called. "Welcome to the Benevolent Protective Society of Butchers, Slaughterhouse Men, and Killers-at-Large. I'm Sammy Jones, finest axeman in the Americas and probably Europe, too."

Blaine sat down and was introduced to the other hunters. They represented half a dozen nationalities, although English was their common tongue.

SAMMY Jones was a squat, black-haired, bull-shouldered man, dressed in patched and faded khakis, with several old hunting scars across his craggy, thick-browed face.

"First hunt?" he asked, glancing at Blaine's neat pressed khakis.

Blaine nodded, removed his rifle from its plastic bag and fitted the bayonet to its end. He tested the locking mechanism, tightened the rifle's strap, and removed the bayonet again.

"Can you really use that thing?" Jones queried interestedly.

"Sure," Blaine said, more confidently than he felt.

"Hope so. Guys like Hull have a nose for the weak sisters. They try to cut 'em out of the pack early."

"How long does a hunt usually last?" Blaine asked.

"Well," Jones said, "longest I was ever on took eight days. That was Asturias, where my partner Sligo got his. Generally a good



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pack can pin down a Quarry in a day or two. Depends on how he wants to die. Some try to hang on as long as they can. They run to cover. They hide in caves and ravines, the dirty treacherous dogs, and you have to go in for them and chance a thrust from the dark. That's how Sligo got it. But I don't think Hull's that way. He wants to die like a great big fire-eating he-man hero. So he'll stalk around and take chances, looking to see how many of us he can knock off with his pigsticker."

"You sound as if you don't approve," Blaine said.

Sammy Jones raised his bushy eyebrows. "I don't hold with making a big fuss about dying. Here comes the hero himself."

Hull entered the room, lean and elegant in khaki-colored silk, with a white silk bandanna knotted loosely around his neck. He carried a light pack, and strapped to one shoulder was a thin, wicked-looking rapier.

"Good morning, gentlemen," he said. "Weapons all sharpened, packs on straight, shoelaces firmly tied? Excellent!"

Hull walked to a window and drew the curtains aside.

"Behold the first crack of dawn, a glorious streak in our eastern skies, harbinger of our fierce Lord Sun who rules the chase. I shall leave now. A servant will inform you when my half-hour grace is done. Then you may pursue and kill me upon sight — *if* you are able! The estate is fenced. I will remain within its confines and so shall you."

Hull bowed, then walked quickly and gracefully out of the room.

"God, I hate these fancy birds!" Sammy Jones raved, after the door was closed. "They're all alike, every one of them. Acting so cool and casual, so goddam *heroic*. If they only knew how bloody *silly* I think they are — me that's been on hunts for twenty-eight lousy years."

"Why do you hunt? Blaine asked.

JONES shrugged. "My father was an axeman and he taught me the business. It's the only one I know."

"You could learn a different trade," Blaine said.

"I suppose I could. The fact is I *like* killing these aristocratic gentlemen. I hate every rich snob among them with their country club hereafter that a poor man can't afford. I take pleasure in killing them, and if I had money, I'd *pay* for the privilege."

"And Hull enjoys killing poor men like you," Blaine said. "It's a sad world."

"No, just an honest one," Sammy Jones told him. "Stand up. I'll fasten your pack on right."

When that was done, Sammy



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Jones said, "Look, Tom, why don't you and me stick together on this hunt? Mutual protection, like?"

"*My* protection, you mean," Blaine said.

"Nothing to be ashamed of. Every skilled trade must be learned before it can be practiced. And what better man to learn from than myself, the finest of the fine?"

"Thanks," said Blaine gratefully. "I'll try to hold up my end, Sammy."

"You'll do great. Now Hull's a fencer, be sure of it, and fencers have their little tricks which I'll explain as we go along. When he—"

At that moment, a servant entered, carrying an old, ornate chronometer. When the second hand passed twelve, he looked sharply at the hunters.

"Gentlemen," he said, "the time of grace is passed. The chase may begin."

The hunters trooped outside into the gray, misty dawn. Theseus the tracker, balancing his trident across his shoulders, picked up the trail at once. It led upward, toward a mist-wreathed mountain.

Spread out in a long single file, the hunters started up the mountain's side.

Soon the early morning sun had burned away the mists. Theseus lost the trail when it crossed bare granite. The hunters spread out in a broken line across the face of the mountain and continued advancing slowly and warily upward.

At noon, the broadsword man picked a fragment of khaki-colored silk from a thornbush. A few minutes later, Theseus found footprints on moss. They led down into a narrow, thickly wooded valley. Eagerly the hunters pressed forward.

"Here he is!" a man shouted.

Blaine whirled and saw, fifty yards to his right, the man with the morning-star running forward. He was the youngest of the hunters, a brawny, self-confident Sicilian. His weapon consisted of a stout handle of ash, fixed to which was a foot of chain. At the end of the chain was a heavy spiked ball, the morning-star. He was whirling this weapon over his head and singing at the top of his lungs.

JONES and Blaine sprinted toward him. They saw Hull break from the bushes, rapier in hand. The Sicilian leaped forward and swung a blow that could have felled a tree. Hull dodged lightly out of the way and lunged.

The morning-star man gurgled and went down, pierced through the throat. Hull planted a foot on his chest, yanked the rapier free, and vanished again into the underbrush.

"I never could understand why



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a man'd use a morning-star," Sammy Jones said. "Too clumsy. If you don't hit your man the first lick, you never recover in time."

The Sicilian was dead. Hull's passage through the underbrush was clearly visible. They plunged in after him, followed by most of the hunters, with flankers ranged on either side.

Soon they encountered rock again and the trail was lost.

All afternoon they searched, with no luck. At sundown, they pitched camp on the mountainside, posted guards, and discussed the day's hunting over a small campfire.

"Where do you suppose he is?" Blaine asked.

"He could be anywhere on the damned estate," Jones said. "Remember, he knows every foot of ground here. We're seeing it for the first time."

"Then he could hide from us indefinitely."

"If he wanted to. But he wants to be killed, remember? In a big, flashy, heroic way. So he'll keep on trying to cut us down until we get him."

Blaine looked over his shoulder at the dark woods. "He could be standing there now, listening."

"No doubt he is," Jones said. "I hope the guards stay awake."

Conversation droned on in the little camp and the fire burned low. Blaine wished morning would come. Darkness reversed the roles. The hunters were the hunted now, stalked by a cruel and amoral suicide intent upon taking as many lives with him as possible.

With that thought, Blaine uneasily dozed off.

SOMETIME before dawn, he was awakened by a scream. Grabbing his rifle, he sprang to his feet and peered into the darkness. There was another scream, closer this time, and the sound of hurried movement through the woods. Then someone threw a handful of leaves on the dying fire.

In the sudden yellow glow, Blaine saw a man staggering back to the camp. It was one of the guards, trailing his spear behind him. He was bleeding in two places, but his wounds didn't appear fatal.

"That bastard," the spearman sobbed, "that sneaky bastard."

"Take it easy, Chico," one of the men said, ripping open the spearman's shirt to clean and bandage the wound. "Did you get him?"

"He was too quick," the spearman moaned. "I missed."

That was the end of sleeping for the night.

The hunters began moving again at the first light of dawn, widely scattered, looking for a trace of the Quarry. Theseus found



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a broken button and then a half-erased footprint. The hunt veered, winding up a narrow-faced mountain.

At the head of the pack, Otto gave a sudden yell. "Hey! Here! I got him!"

Theseus rushed toward him, followed by Blaine and Jones. They saw Hull backing away, watching intently as Otto advanced, swinging the bola around his cropped head. The Argentinian lasso hissed in the air, its three iron balls blurring. Then Otto released it. Instantly Hull flung himself to the ground. The bola snaked through the air inches above his head, wrapped itself around a tree limb and snapped it off. Hull, grinning broadly, ran toward the weaponless man.

Before he could reach him, Theseus had arrived, flourishing his trident. They exchanged thrusts. Then Hull whirled and ran.

Theseus lunged. The Quarry howled with pain but continued running.

"Did you get him?" Jones asked.

"A flesh wound in the rump," Theseus said. "Probably just painful to his pride."

The hunters ran on, panting heavily, up the mountain's side. But they had lost the Quarry again.

They spread out, surrounding the narrowing mountain, and slowly began working their way toward the peak. Occasional noises and footprints told them the Quarry was still before them, retreating upward. As the peak narrowed, they were able to close their ranks more, lessening any chance of Hull slipping through.

BY late afternoon, the pine and spruce trees had become sparse. Above them was a confused labyrinth of granite boulders, and past that the final peak itself.

"Careful now!" Jones called to the hunters.

As he said it, Hull launched an attack. Springing from behind a rack pinnacle, he came at old Bjorn the mace man, his rapier hissing, trying to cut the man down quickly and escape the throttling noose of hunters.

But Bjorn gave ground only slowly, cautiously parrying the rapier thrusts, both hands on his mace as though it were a quarterstaff. Hull swore angrily at the phlegmatic man, attacked furiously, and threw himself aside just in time to avoid a blow of the mace.

Old Bjorn closed — too rapidly. The rapier darted in and out of his chest like a snake's flickering tongue. Bjorn's mace dropped and his body began rolling down the mountainside.

But the hunters had closed the


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circle again. Hull retreated upward, into a maze of boulders.

The hunters pressed forward. Blaine noticed that the sun was almost down; already there was a twilight hue to the air, and long shadows stretched across the gray rocks.

"Getting toward evening," he panted to Jones.

"Maybe half an hour more light," Jones said, squinting at the sky. "We better get him soon. After dark, he could pick every man of us off from this rock."

They moved more quickly now, searching among the high boulders.

"He could roll rocks down on us," Blaine said nervously.

"Not him," Jones grunted. "He's too damn proud."

And then Hull stepped from behind a high rock near Blaine.

"All right, rifleman," he challenged.

Blaine, his rifle at high port, just managed to parry the thrust. The blade of the rapier rasped along the gun barrel, past his neck. Automatically he deflected it. Something drove him to roar as he lunged, to follow the lunge with an eager disemboweling slash and then a hopeful butt stroke intended to scatter his enemy's brains across the rocks. For that moment, Blaine was no longer a civilized man operating under a painful necessity; he was a preying creature joyously pursuing his true vocation of murder.

The Quarry avoided his blows with quick sullen grace. Blaine stumbled after him, anger sapping his skill. Suddenly he was shoved aside by Sammy Jones.

"Mine," Jones said. "All mine. I'm your boy, Hull. Try me with the pigsticker."

HULL, his face expressionless, advanced, his rapier flashing. Jones stood firm on slightly bowed legs, the battle-axe turning lightly in his hands. Hull feinted and lunged. Jones parried so hard that sparks flew, and the rapier bent like a green stick.

The other hunters had come up now. They chose seats on nearby rocks and caught their wind, commenting on the duel and shouting advice.

"Pin him against the cliff, Sammy!"

"No, over the edge with him!"

"Want some help?"

"Hell, no!" Jones shouted back.

"Watch out he don't nip a finger, Sammy."

"Don't worry," Jones said.

Blaine watched, his rage ebbing as quickly as it had come. He had assumed that a battle-axe would be a clumsy weapon requiring a full backswing for each stroke. But Sammy Jones handled the short, heavy axe as though it were a baton. He took no backswing


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but let drive from any position, recovering instantly, his implacable weight and drive forcing Hull toward the cliff's sheer edge.

There was no real comparison between the two men, Blaine realized. Hull was a gifted amateur, a dilettante murderer; Jones was a seasoned killer. It was like matching a ferocious house dog against a jungle tiger.

The end came quickly in the blue twilight of the mountaintop. Sammy Jones parried a thrust and stamped forward, swinging his axe backhanded. The blade bit deep into Hull's left side. Hull fell screaming down the mountain's side. For seconds afterward, they heard his body crash and turn.

"Mark where he lies," Sammy Jones said.

"He's gotta be dead," said the saber man.

"He probably is. But it isn't a workmanlike job unless we make sure."

On the way down, they found Hull's mangled and lifeless body. They marked the location for the burial party and walked on to the estate.

## 16.

THE hunters returned to the city in a group and threw a wild celebration. During the evening, Sammy Jones asked Blaine if he would join him on the next job.

"I've got a nice deal lined up in Omsk," Jones said. "A Russian nobleman wants to hold a couple of gladiatorial games. You'd have to use a spear, but it's the same as a rifle. I'd train you on the way. After Omsk, there's a really big hunt being organized in Manila. Five brothers aim to shove off together. They want fifty hunters to cut them down. What do you say?"

Blaine thought carefully before answering. The hunter's life was the most compatible he had found so far in this world. He liked the rough companionship of men like Sammy Jones, the straight, simple thinking, the life outdoors, the action that erased all doubts.

On the other hand, there was something terribly pointless about wandering around the world as a paid killer, a modern and approved version of the bully, the bravo, the thug. There was something futile about action just for action's sake, with no genuine intent or purpose behind it, no resolution or discovery. These considerations might not arise if he were truly what his body seemed; but he was not. The hiatus existed and had to be faced.

And, finally, there were other problems that this world presented, other challenges more fitting to his personality. And those had to be met.



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"Sorry, Sammy," he said.

Jones shook his head. "You're making a mistake, Tom. You're a natural-born killer. There's nothing else for you."

"Perhaps not," Blaine admitted. "I have to find out for sure, though."

"Well, good luck," Sammy Jones said. "And take care of that body of yours. You picked a good one."

Blaine blinked involuntarily. "Is it so obvious?"

Jones grinned. "I been around, Tom. I can tell when a man is wearing a host. If your mind had been *born* in that body, you'd be away and hunting with me. And if your mind had been born in a different body—"

"Yes?"

"You wouldn't have gone hunting in the first place. It's a tricky splice, Tom. You'd better figure out which way you're going."

"Thanks," Blaine said. They shook hands and Blaine left for his hotel.

HE reached his room and flung himself, fully dressed, upon the bed. When he awoke, he would call Marie. But first he had to sleep. All plans, thoughts, problems, decisions, even dreams, would have to wait. He was tired down to the very bone.

He snapped off the lights. Within seconds, he was asleep.

Several hours later, he awoke with a sensation of something wrong. The room was dark. Everything was still, more silent and expectant than New York had any right to be.

He sat upright in bed and heard a faint movement on the other side of the room, near the washbasin.

Blaine reached out and snapped on the light. There was no one in the room. But as he watched, his enameled washbasin rose in the air. Slowly it lifted, hovering impossibly without support. And at the same time he heard a thin shattering laugh.

He knew at once that he was being haunted, and by a poltergeist.

Carefully he eased out of bed and moved toward the door. The suspended basin dipped suddenly and plunged toward his head. He ducked and the basin shattered against the wall.

His water pitcher levitated now, followed by two heavy tumblers. Twisting and turning erratically, they edged toward him.

Blaine picked up a pillow as a shield and rushed to the door. He turned the lock as a tumbler shattered above his head. The door wouldn't open. The poltergeist was holding it shut.

The pitcher struck him violently in the ribs. The remaining tumbler swung in an ominous circle



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around his head and he was forced to retreat from the door.

He remembered the fire escape outside his window. But the poltergeist thought of it as he started to move. The curtains suddenly burst into flame. At the same instant, the pillow he was holding caught fire, and Blaine threw it from him.

"Help!" he shouted. "Help!"

He was being forced into a corner of the room. With a rumble, the bed slid forward, blocking his retreat. A chair rose into the air and poised itself for a blow at his head.

And continually there was a thin and shattering laughter that Blaine unnervingly could almost recognize.

—ROBERT SHECKLEY

CONTINUED NEXT MONTH

★ ★ ★ ★ ★

# FORECAST

At this writing, only the first installment of TIME KILLER by Robert Sheckley has appeared, yet so vigorously fresh is its basic concept and so daringly imaginative its future society and written with such ingenuity and power that the story is already being ranked with *The Demolished Man, Gravy Planet, The Puppet Masters* and other great Galaxy serials. As you can see from the second installment, the story does not pause to catch its breath; it gains momentum with each chapter until — well, next month, hunted by the living and haunted by the dead, Blaine has to do a lot better than merely look alive to stay alive in this fantastic world where life after death is a scientific reality — for those who can take it with them!

Scheduling a novella with an installment of a serial is generally just not done; it means packing too much into an issue. But you know us by now, not satisfied with anything less than shooting the works, going for broke, and other such expressions of editorial daredeviltry. So you'll be reading JOIN NOW by Finn O'Donnevan next month and discovering just why it is that Crompton has made the most chancy possible mind bet — winning it means he literally has to collect himself on two crazy worlds!

A novelet if there's room, short stories for sure . . .

And Willy Ley's startling revelation of THE STRANGE PLANET NEXT DOOR that we are busy sending explorers to right now, this very minute! The immense wealth they are finding can make the dire predictions of Malthusians hang fire for still more centuries, perhaps millenia. And as for its incredible natives — many of them just have no business being alive!

As you can see, it's not an issue to miss.



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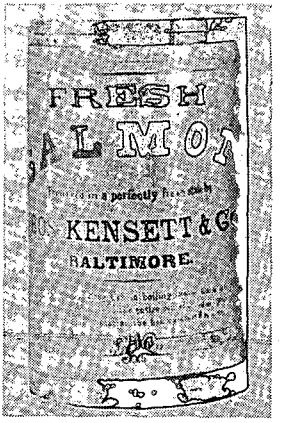


Fig. 1: Canned salmon—116 years old

*(Continued from page 2)*

shortened "tin canister" to "tin can" —and the battle rages on between English "tin" and American "can." Both are equally right or equally wrong, for a *can* is a barbarized canister and a *tin* is 99½% steel, with only a molecular protective coating of tin — now, of course, deposited by electrolysis instead of the medieval dip — or no tin at all.

Not horsepower but muscle made the early 19th century tin cans. Tin-plated sheet iron was cut into can bodies by hand- or foot-

**Fig. 2: Petticoat and streamlined cans; the "U.S. Army *Emergency Ration*" in the key can dates back to 1906, forerunner of famous C-rations of World War II**



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operated shears and bent around a cylindrical mold by a brawny tinsmith. More muscles and shears cut out round tops and bottom and forced the pieces together. Then the tinsmith's assistant applied hot solder along the side seams and end sections. A cap hole was left in the top through which food to be canned could be forced, and a small plug was soldered into place. Sixty canisters a day was the maximum output for even an expert smith.

Later in the century, a hand press was used to shape the can bodies, boosting production to 100 cans per day per man. But the rest of the process remained the same.

Today, high-speed machinery, which produces up to 500 cans a minute, has made canned food inexpensive and the supermarket possible. Ninety-five per cent of our salmon, 75 per cent of our total tomato crop, and 50 per cent of such fruits and pears and peaches are canned by 3,500 canneries, who get their containers from 48 can manufacturers.

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Fig. 3: Can making half a century ago and now — 100 a day by hand *versus* 500 a minute by machine, adhesive crimps *versus* unreliable solder seams

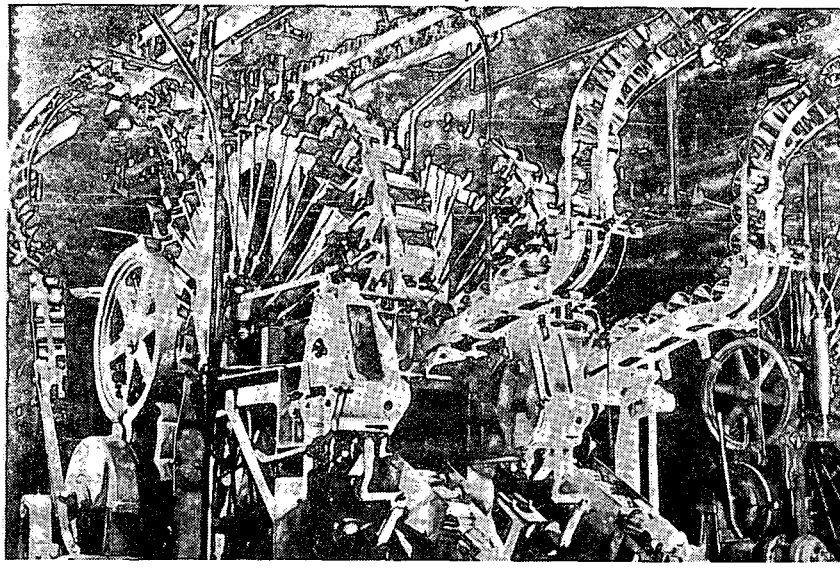



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**Fig. 4: Yesterday and today in shopping — the whole world's produce tastily, freshly, sanitarily packaged, while cutting shopping and cooking time to a fraction**

BORN in a revolution, the tin can was forced to maturity by wars. Both Blue and Gray were fed from cans in the field during the Civil War, but that was only a token of what was to come; the American GI of World War II ate out of cans, fought with ammunition from hermetically sealed cans, was nursed with canned blood plasma, produced dense smoke screens from a can, repaired his jeep with canned monkey wrenches, and drove canned motorcycles dropped from the sky by parachute.

At sea, meanwhile, the U.S. Navy urgently needed canned water for its life rafts, for men survived storms and sea battles only to be destroyed by thirst and salt-water sickness. It was a tricky technical problem for the can manufacturers; trace minerals made canned water undrinkable, and a heat-resistant germ in water —*bacillius welchii*— often caused disabling dysentery. Canned water also had a metallic taste, and in freezing weather, the expanding ice broke open the strongest can made.



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Researchers solved the problem by using distilled water completely free of minerals and bacteria, then putting it in a metal can lined with a temperature-resistant wax that kept the water potable both in the steaming Pacific and frozen Arctic. The cans were constructed with extra strong seams and with a small vacuum at the top into which any ice could safely expand.

Distilled water, however, while drinkable, is hardly tasty stuff, and the war-born can has been improved until it can be filled with ordinary tap water. It is now stockpiled by many Civil Defense units throughout the country.

That bit of ingenious problem-solving is a direct descendant of the research into raw materials and techniques that is the real story of the tin can. One such researcher, Gail Borden, for whom one of the largest dairy firms in the world is named, produced a canned product that has saved the lives of countless thousands of infants in the past century.

In the early 1850s, Borden was returning to the U.S. from England, where he had been awarded the London World's Fair Gold Medal for his canned "meat biscuit," which he had supplied to California Gold Rush pioneers, to Arctic explorers such as Sir Edward Belcher, and later to Florence Nightingale, to help feed her wounded soldiers in the Crimea. Noticing that babies of seasick immigrants in steerage were suffering from lack of milk, he realized the plight of mothers who could not nurse their own children.

Borden spent all his money and time for over a year in a Brooklyn cellar lab, much of the while penniless. His boiled-off milk concentrate tasted terrible and looked worse. "Something in the air contaminates it," he noted in his careful records. But he found the secret one day while watching members of a Shaker community preserving fruit by first boiling it in a "vacuum pan." His condensed milk is still used for infants where pasteurized milk is not available, and evaporated milk is yet another outgrowth of his findings.

MANY products need similar scientific coaxing to fit them comfortably into tin cans. The beer can, for instance, now holds 16 per cent of industry production, but it almost didn't come about at all. Beer is so allergic to tin that even infinitesimal amounts of it turn the clearest beer cloudy. The answer was a protective enamel, but beer stayed in bottles a good many years until researchers found the right one. Now "tin" cans is even more of a misnomer, for those enamels and others are coating ever more of the new cans, making them wholly tinless.

Size, shape, construction, con-



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tents, function — the tin can is ceaselessly changing these attributes in a revolutionary evolutionary rush. Lithography on metal —impossible, but not any more; it's as bright and colorful as anything printed on paper. Aluminum cans—can't be done, but it is, shiny and rustproof and much lighter than steel, with a future as promising as Durand's "tin canister" proved to be a century and a half ago.

Of all the innovations, the most intriguing is the pushbutton aerosol can, which sprays out everything from whipped cream to a golfball refinisher. "People love them," says William J. Milton, president of the Can Manufacturers Association. "By 1960, we'll be using them at the rate of a billion a year."

Still another war-baby can development, aerosols came about when the U.S. Army asked the Department of Agriculture to develop an insecticide dispenser that GIs could use against the malaria-carrying mosquito in the Pacific Theater during World War II. The result was the famed "bug bomb," a heavy welded steel container holding the insecticide and a propellant — Freon gas liquified under pressure — which forced out the mosquito killer at the touch of a button.

For all their popularity among the troops, aerosols were nothing to bet on after the war; a container able to hold the 70 pounds of pressure required has to be more of a grenade than a tin can. Back to the lab went the bug bomb, and there it stayed until the answer was found — a mixture of Freon-12 and Freon-11. The new propellant needed only half the pressure, which meant that lightweight containers were possible, in turn making possible all manner of mistified products, with more and more on the way.

AND now comes Freon C-318 from Du Pont, at present under test. If successful, C-318, along with compressed hydrogen, will create a whole new sub-section in food stores — aerosol-dispensed sandwich spreads, syrups, sauces and frostings, just as a modest beginning.

It's literally true that people will buy anything in a pushbutton can, even air — Liquid Glaze, Inc., sells cans of compressed gas called Spair that can inflate a tire of 22 pounds in six seconds.

With the U. S. Government owning the aerosol patent and licensing all comers either free or the next thing to it, small businessmen are crowding into the aerosol game right alongside industrial giants. Making a good thing of it, too, for we're just skimming the froth off a deep lake of products that can be aerosold.


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In medicine — burn ointments, disinfectants, decontaminants, exact dosages in a hurry during an angina attack, when speed counts: the patient simply puts the tube in his mouth and pushes the button.

Home, farm and factory — there now are area deodorants, fire extinguishers, run stoppers for stockings, beehive smoke, dye for marking animals that have been vaccinated, which can also no doubt be used for crates and cases.

If there is any limit to what can be put into an aerosol can, we're not even remotely in sight of it. Like many of our modern frontiers, this one is not rawly, blatantly visible, but it's a Gold Rush all the same.

WHAT'S ahead in the tin can? Like the aerosol, which couldn't have been foreseen even weeks before it happened, the more startling future developments remain either unguessable or laboratory secrets, not to be announced until they are perfected. But some are on the horizon.

Another wartime innovation, the hotcan, will soon be ready for marketing. Merely puncture the hotcan, actually one can within another, and add water, and you've started a chemical reaction that speedily heats the contents.

Tinless now, but opaque, cans can be made of transparent plastics to display their wares as attractively as glass jars do now, and without fragility.

Aluminum and magnesium cans are lighter, but a pound of merchandise still weighs a pound — a fact that researchers are bound to challenge, if they aren't already doing so.

And the self-propagating can— one can to spray out another around all the ungainly or scattersome, perishable or storageable— tables and diamond dust, electric bulbs and tropic-fresh bananas, tanks and cadavers, archeological finds and the air of other worlds.

Cans within cans, cans atop cans, cans that look like cans, cans that look like nothing under the sun, cans to enclose anything except service and even that may somehow come about some day.

What the film industry says of a movie when the last scene is shot, we may say of the future: "It's in the can." A figure of speech, of course, but hyperbolically true. The breakthroughs in packaging make no headlines. They merely make civilization a fact.

— H. L. GOLD

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